Digital Engagement Practices (DEPs)

FINAL REPORT

The Board of the
International Organization of Securities Commissions

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EXECUTIVE SUMMARY

Digital Engagement Practices (DEPs) can improve access and enhance choice for retail investors. When used well, DEPs (e.g., digital engagement techniques such as notifications, nudges, gamification) can be a powerful tool for engagement, building financial literacy, and driving positive outcomes. In the financial services context, gamification can attract new audiences, such as younger retail investors, to investing. The increase in trading activity because of DEPs could improve liquidity and could reduce transaction costs.[1]

However, DEPs may also result in investor harm, as they can encourage retail investors to trade more often when it may not be in their best interest. They may also steer retail investors to invest in higher risk products or change their investment strategy without being aware of or understanding the risks. Likewise, DEPs can create potential conflicts of interest when market intermediaries use them to influence retail investor behaviour to drive revenue growth to the detriment of retail investors.

As a result of DEPs' potential impact on retail investors, both positive and negative, IOSCO deems that it would be beneficial to develop a common understanding of DEPs; to review the emerging DEPs techniques and associated conduct and retail investor protection issues, and to understand the impact on retail investors from increased use of DEPs by market intermediaries.

To this purpose, the Final Report for Digital Engagement Practices (Final Report) considers the existing IOSCO work; members' regulatory approaches to DEPs; and other international standards and guidance to identify potential issues and gaps, with a caveat that there is currently no global standard on how regulators and other stakeholders should consider addressing any challenges that may stem from the increased use of DEPs by market intermediaries.[2]

1 See CFA Institute, "Fun and Games Investment Gamification and Implications For Capital Markets", p.1., November 2022, available at: https://rpc.cfainstitute.org/en/research/reports/2022/investment-gamification-implications

2 A number of jurisdictions are in the process of considering their regulatory approach to the use of DEPs by market intermediaries. However, there is currently limited guidance on the regulation of DEPs and regulators are considering how existing securities laws apply to the use of DEPs by market intermediaries.

CHAPTER 1: INTRODUCTION

Technological developments are changing the way in which retail consumers interact with financial services and products and act as catalysts in bringing more retail investors to capital markets. The emergence of online trading platforms and mobile trading apps have made trading and stock markets more accessible to retail investors with minimal physical touch points. Similarly, there is an increasing use of these online trading platforms and mobile apps, and of social media generally, to promote the offerings of securities and other financial products.

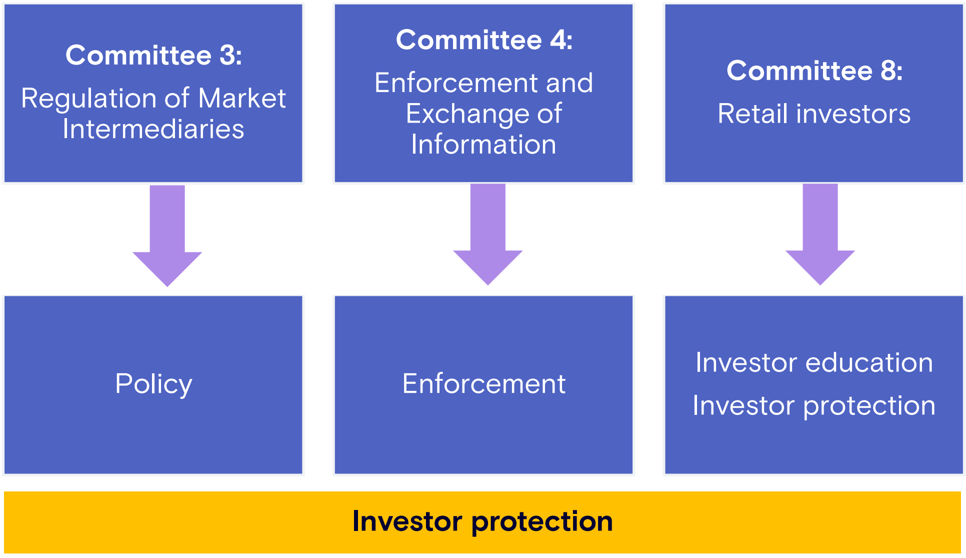
As a result of those developments, in March 2020, the IOSCO Board established the Retail Market Conduct Task Force (RMCTF) to gain a better understanding of the evolving retail trading landscape and to develop measures securities regulators could consider as they seek to address retail market risks and emerging trends.[3]

IOSCO's RMCTF delivered a short-term report in December 2020 with a specific focus on retail conduct implications of COVID-19 and in March 2023 an RMCTF Final Report[4], noting the surge in self-directed trading, and more frequent offerings of higher risk (including leveraged) products made available to retail investors via technological means resulting in significant retail investor losses. This surge can, in part, be explained by key trends such as the rise of finfluencers, and the increasing use of Digital Engagement Practices (DEPs) by market intermediaries in their distribution channels – directly or through third parties - to communicate and engage with retail investors.

To explore the key trends identified in the RMCTF Final Report, the IOSCO Board established a new mechanism to coordinate activities across policy, enforcement, and investor education, bringing together representatives from key IOSCO Committees under a holistic umbrella of investor protection. This mechanism was set up in June 2023 and named the Retail Investor Coordination Group (RICG), as shown below.

3 See International Organization of Securities Commissions, "Retail Market Conduct Task Force Final Report", March 2023, available at: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD730.pdf

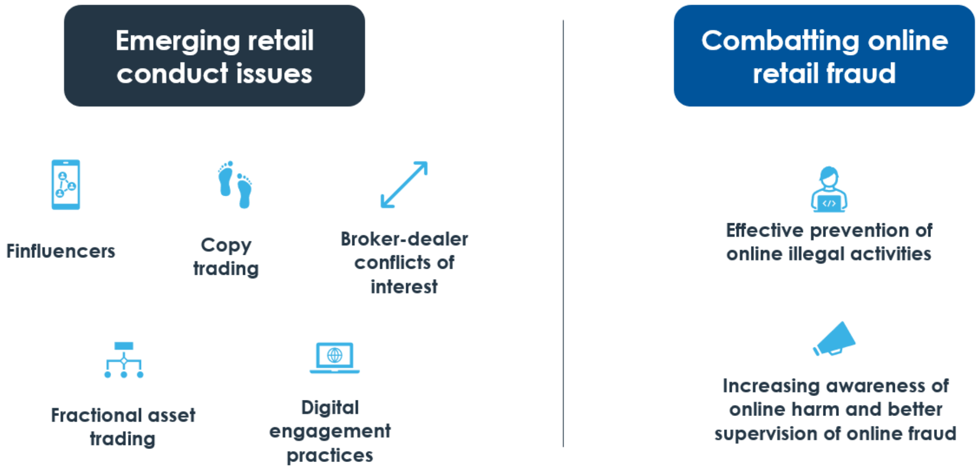
4 Ibid.



The RICG's work is focussed on identifying and mitigating potential harms from emerging retail conduct issues on the one hand, with both policy and financial education sets of initiatives focused on (a) finfluencers; (b) copy trading; (c) Neo-brokers; (d) fractional asset trading; and (e) DEPs.

On the other hand, RICG's enforcement focus is devoted to the enforcement activities securities regulators undertake to deter online harm and fraud**.** These cover two sub-areas: (i) international cooperation for effective deterrence and investigation of online illegal activities; and (ii) increasing awareness of online harm and better supervision of online fraud and mis-selling.[5] The deliverables of the two sub-areas are various enforcement tools to help securities regulators proactively combat online harm and fraud.

5 Mis-selling can be defined as a sales practice in which a financial product or service is deliberately or negligently misrepresented or a customer is misled about its suitability or appropriateness for the purpose of making a sale. Mis-selling may involve the deliberate omission of key information, the communication of misleading advice, or the sale of an unsuitable or inappropriate financial product or service based on the customer's expressed needs and preferences.



1.1 - Objectives of this Final Report – DEPs

This report builds on the findings of the IOSCO RMCTF Final Report and the IOSCO Report on Retail Distribution and Digitalisation.[6] It mainly aims to identify the types and uses of DEPs, potential benefits and risks in use of DEPs by market intermediaries, potential regulatory issues and gaps, and the potential impact of DEPs on retail investor behaviour and decisions.

The Final Report proposes good practices as guidance in relation to market intermediaries' use of DEPs. Hence, it aims to facilitate international alignment in this area. It identifies the issues and gaps in regulation of DEPs and provides good practices as guidance for IOSCO members so as to facilitate regulatory alignment in the supervision and regulation of DEPs. This Final Report also analyses how DEPs can be used to promote investor education and educational material and provides some good practices in this context.

The Final Report is based on a comprehensive survey by RICG of IOSCO members, extensive academic research, IOSCO members' experiences and various interactions with the financial industry via roundtables and other means. Appendix A to this report contains a list of the 30 IOSCO regulatory authorities, from 26 jurisdictions, that responded to the IOSCO RICG survey on DEPs. The Appendix also sets out the consultation questions and summarizes the feedback received, which was taken into account when finalizing this report.

The Final Report is set out as follows: Chapter 2 talks about academic and regulatory research on the use of DEPs. Chapter 3 deals with the regulatory landscape and the rules applicable to the use of DEPs by market intermediaries.

[6] See International Organization of Securities Commissions, Report, "Report on Retail Distribution and Digitalisation", October 2022, available at: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD715.pdf

Chapter 4 covers the benefits and risks associated with the use of DEPs. Chapter 5 illustrates the current global state of play in the use of DEPs. Chapter 6 talks about the market intermediaries' governance and conflicts of interest management related to DEPs. Chapter 7 deals with the enforcement practices and the international cooperation and the cross-border aspects. Chapter 8 focusses on DEPs and investor education. Chapter 9 proposes some good practices on DEPs.

CHAPTER 2: ACADEMIC AND REGULATORY RESEARCH ON THE USE OF DEPs

The use of DEPs by market intermediaries is a relatively new phenomenon, which emerged with the recent advancement of technology, particularly via the use of mobile apps and online trading platforms, into the retail trading sphere. Hence, there is currently limited academic and regulatory research on DEPs. For this reason, one of the initial purposes of this Final Report is to lay out findings of some relevant academic and regulatory research and studies on DEPs.

2.1 - Definition

While there is no agreed definition of DEPs, some general descriptions include the following:

ESMA describes DEPs as *"the tools including behavioural techniques, differential marketing, gamification, design elements or design features that intentionally or unintentionally engage with retail investors on digital platforms as well as the analytical and technological tools and methods".*[7]

US SEC stated that DEPs can include *"behavioural prompts, differential marketing, game-like features (commonly referred to as "gamification"), and other design elements or features designed to engage retail investors when using a firm's digital platforms (e.g., website, portal, app) for services such as trading, robo-advice, and financial education."*[8]

There are several common elements which can be drawn together to establish a common understanding of DEPs. The common elements of the descriptions of DEPs include some or all of the following:

[7] See ESMA, Discussion Paper, "MiFID II investor protection topics linked to digitalisation" para 83, December 2023, available at: ESMA35-43-3682_Discussion_Paper_on_MiFID_II_investor_protection_topics_linked_to_digitalisation)).pdf

[8] See US SEC, Press Release, "SEC Requests Information and Comment on Broker-Dealer and Investment Adviser Digital Engagement Practices, Related Tools and Methods, and Regulatory Considerations and Potential Approaches; Information and Comments on Investment Adviser Use of Technology", August 2021, available at: https://www.sec.gov/newsroom/press-releases/2021-167

- the use of technology or digital platforms;
- behavioural techniques or prompts, and
- use of differential marketing or customisation.

2.2 - Explaining the rationale behind the use of DEPs & Findings on the impact of the use of DEPs on retail investor behaviour

Deviation from standard rational models of behaviour

Research findings from some IOSCO members (e.g., Quebec AMF, 2022; Dutch AFM, 2021; UK FCA, 2013; US SEC, 2010) highlight that retail investors' behaviour in response to the use of DEPs may deviate from standard rational models of behaviour.[9] For instance, these findings point out that retail investors tend to have a biased focus on the present relative to the (near) future, making them sensitive to immediate gratification. The findings also show that people's attention and capacity to process information is limited, leading to misjudgements about what is and what is not important when making decisions.

Perception of uncertainty and risk

One research paper has stated that people have a biased perception of uncertainty and risk, making it difficult to properly evaluate possible outcomes in the distant future.[10] As a result, behaviour and choices are often affected by the context and environment. The presentation of choices and choice options,

[9] See AFM study, "AFM: gebruik gedragsinzichten om verstandige financiële keuzes te bevorderen", March 2021, available at: https://www.afm.nl/en/sector/actueel/2021/mrt/principes-consumentengedragsinzichten (in Dutch);

See Quebec AMF, Issues Paper, "Insights into the risks and benefits of digital financial services for consumers", available at: https://lautorite.qc.ca/fileadmin/lautorite/grand_public/publications/professionnels/doc-reflexion-consos-tech_an.pdf

See UK FCA, Occasional Paper, "Applying behavioural economics at the Financial Conduct Authority", April 2013, available at: https://www.fca.org.uk/publication/occasional-papers/occasional-paper-1.pdf

See US Federal Research Division, Library of Congress under an Interagency Agreement with the US SECSEC, Paper on "Behavioral Patterns And Pitfalls of US Investors", August 2010, available at https://www.sec.gov/investor/locinvestorbehaviorreport.pdf (The findings of the author, based on research and analysis adhering to accepted standards of scholarly objectivity. The findings do not necessarily reflect the views of the US SEC, its Commissioners, or other members of the US SEC's staff.)

[10] Banerji, Kundu & Alam, 2022, The Impact of Behavioral Biases on Individuals' Financial Choices under Uncertainty: An Empirical Approach, available at: https://www.researchgate.net/publication/360841130_The_Impact_of_Behavioral_Biases_on_Individuals'_Financial_Choices_under_Uncertainty_An_Empirical_Approach

the design of information, and social cues all have an impact on what people do and choose. This same research paper states that push notifications, reminders, newsletters, and app design features, can be used to grab investors' attention and steer them towards short-term stock movements or certain investment products.

Design features to capitalise on investor bias

Some regulators found that DEPs on online trading platforms may be designed to capitalise on the biases of investors (OSC, 2024 & 2022; AFM, 2023; ASIC, 2023; FCA, 2022).[11] Most of the reports on DEPs cited earlier voice concerns about how these practices may negatively impact investor behaviour and decisions. These concerns stem from research that comes from domains other than financial investing. For instance, reports by the UK FCA (2022)[12] and the OSC (2022)[13] include evidence from casino and lottery gambling, online education, rideshare driving, and online health and exercise programs in explaining the impact of gamification on investor behaviour. The OSC report and a subsequent FCA report[14] also refer to experimental techniques including randomised controlled trials (RCT) of retail investors.

Increasing user engagement

11 See Ontario Securities Commission SC, Research Report, "Digital Engagement Practices in Retail Investing: Gamification & Other Behavioural Techniques", November 2022, available at: https://www.osc.ca/sites/default/files/2022-11/inv_research_20221117_gamification-of-retail-investing_EN.pdf; and "Digital Engagement Practices: Dark Patterns in Retail Investing", February 2024, available at: https://www.osc.ca/sites/default/files/2024-02/inv-research_20240223_dark-patterns.pdf

See Dutch AFM findings, "More carefully considered design of online investment platforms needed", February 2023, available at: https://www.afm.nl/nl-nl/sector/actueel/2023/februari/bewustere-inrichting-online-beleggingsplatform#:~:text=Een%20keuzeomgeving%20kan%20verstandige%20beleggingskeuzes,de%20inrichting%20van%20hun%20platform

See ASIC, Report, "Review of online trading providers", December 2023, available at: https://download.asic.gov.au/media/lqsfve5y/rep778-published-6-december-2023.pdf

See UK FCA, Research Articles, "Gaming trading: how trading apps could be engaging consumers for the worse", November 2022, available at https://www.fca.org.uk/publications/research-articles/gaming-trading-how-trading-apps-could-be-engaging-consumers-worse

12 See Ibid 14, https://www.fca.org.uk/publications/research-articles/gaming-trading-how-trading-apps-could-be-engaging-consumers-worse

13 Ibid, https://www.osc.ca/sites/default/files/2022-11/inv_research_20221117_gamification-of-retail-investing_EN.pdf

14 See FCA, "Research Note: Digital engagement practices: a trading apps experiment", 2024, available at: https://www.fca.org.uk/publications/research-notes/research-note-digital-engagement-practices-trading-apps-experiment

Some academic literature also suggests that DEPs can effectively increase user engagement (e.g., Huang et al., 2021; Kim & Castelli, 2021; Baptista & Oliveira, 2019; Looyestyn et al., 2017; Johnson et al., 2016; Hamari et al., 2014)[15] Certain DEPs, including gamification techniques – such as badges, rewards, and celebratory messages – can provide immediate gratification for investors, thus potentially encouraging them to trade more frequently when it may not be appropriate for them to do so.[16]

2.3 - Gamification techniques used by market intermediaries

According to the research cited above, below are some of the DEP techniques that may be used to increase user engagement:

Push Notifications

[15] Baptista & Oliveira, 2019, Gamification and serious games: A literature meta-analysis and integrative model, available at: https://doi.org/10.1016/j.chb.2018.11.030

Johnson, Deterding, Kuhn, Staneva, Stoyanov & Hides. 2016, Gamification for health and wellbeing: A systematic review of the literature, available at: https://doi.org/10.1016/j.invent.2016.10.002

J. Hamari, J. Koivisto and H. Sarsa, 2014, Does Gamification Work? -- A Literature Review of Empirical Studies on Gamification, available at: https://ieeexplore.ieee.org/document/6758978

Bai, Hew & Huang. 2020, Does gamification improve student learning outcome? Evidence from a meta-analysis and synthesis of qualitative data in educational contexts, available at: https://doi.org/10.1016/j.edurev.2020.100322

See Johnson, Deterding, Kuhn, Staneva, Stoyanov & Hides "Gamification for health and wellbeing: A systematic review of the literature" https://www.sciencedirect.com/science/article/pii/S2214782916300380

See IEEE Paper "Does Gamification Work? -- A Literature Review of Empirical Studies on Gamification" https://ieeexplore.ieee.org/abstract/document/6758978;https://link.springer.com/article/10.1007/s11423-020-09807-z;

See Bai, Hew & Huang "Does gamification improve student learning outcome? Evidence from a meta-analysis and synthesis of qualitative data in educational contexts" at https://www.sciencedirect.com/science/article/abs/pii/S1747938X19302908

[16] See Ontario Securities Commission SC, Research Report, "Digital Engagement Practices in Retail Investing: Gamification & Other Behavioural Techniques", November 2022, available at: https://www.osc.ca/sites/default/files/2022-11/inv_research_20221117_gamification-of-retail-investing_EN.pdf; and "Digital Engagement Practices: Dark Patterns in Retail Investing", February 2024, available at: https://www.osc.ca/sites/default/files/2024-02/inv-research_20240223_dark-patterns.pdf

Several studies have examined the effect of DEPs on investor behaviour and decisions. Arnold et al. (2022)[17] found that "**push notifications**" induced investors of an online trading platform to trade more and to take on more risk. Moss (2022)[18] studied the effect push notifications sent to investors on one trading app when their portfolio moved +/-5% intraday. In the fifteen minutes following a push notification, investors traded at least 25% more frequently than they would typically trade.

Top Traded Lists

"Top-traded lists" are another example of a DEP that may impact investors by steering their attention towards certain stocks or products. For instance, Barber et al. (2022)[19] found that users of one specific trading app were more likely to buy stocks on the app's "Top Movers" list.

The OSC (2022)[20] conducted an RCT experiment with 2,430 investors on a simulated trading platform. Participants who were randomly assigned to a platform that included a list of top-traded stocks were 14% more likely to buy and sell the stock on that list, as compared to participants in the control group with no top-traded list.

Peer Information

Andraszewicz et al. (2023)[21] used a similar method – a simulated trading platform – to test the effect of **"peer information"**. Participants who were shown information about top performing peers held more risky assets in their portfolio and traded more actively. Apesteguia et al. (2020)[22] found a similar effect of

[17] Arnold, Pelster & Subrahmanyam, 2022, Attention triggers and investors' risk taking, available at: https://doi.org/10.1016/j.jfineco.2021.05.031

[18] Moss, 2022, How do Brokerages' Digital Engagement Practices Affect Retail Investor Information Processing and Trading? available at: https://austinsmoss.github.io/austinmoss.me/Moss_JMP_How-Do-DEPs-Affect-Retail-Investor-Information-Processing-and-Trading.pdf

[19] BARBER, B.M., HUANG, X., ODEAN, T. and SCHWARZ, C., 2022, Attention-Induced Trading and Returns: Evidence from Robinhood Users, available at: https://onlinelibrary.wiley.com/doi/abs/10.1111/jofi.13183

[20] See Ontario SC, Research Report, "Digital Engagement Practices in Retail Investing: Gamification & Other Behavioural Techniques", November 2022, available at: https://www.osc.ca/sites/default/files/2022-11/inv_research_20221117_gamification-of-retail-investing_EN.pdf

[21] Andraszewicz, S., Kaszás, D., Zeisberger, S. et al. 2023, The influence of upward social comparison on retail trading behaviour, available at: https://doi.org/10.1038/s41598-023-49648-3

[22] Jose Apesteguia, Jörg Oechssler, Simon Weidenholzer, 2020, Copy Trading, available at: https://doi.org/10.1287/mnsc.2019.3508

providing peer information on risk-taking, as well as an even larger effect when participants could directly copy the trades of others.

Achievement Badges and Points

Some studies have tested the effect of other gamification elements, such as "**achievement badges**" and "**points**". The OSC (2022)[23] found that participants on a simulated trading platform made almost 40% more trades if they were rewarded with points, even when those points held a negligible economic value. Similarly, the FCA (2024)[24] found that investors on a simulated trading platform made 11% more trades if they were rewarded with points linked to a prize-draw. They also increased the proportion of trades they traded in that were risky investments by 6%. The study found that this was the case, even though the expected return from the prize-draw was very low.

Default Settings

Another prominent example of DEPs cited by some regulators is "**default settings**", which can be used to influence the amount investors invested and the amount of leverage used, by using investors' tendency to follow the path of least resistance.

Other design features of trading apps and investment platforms can also impact investor behaviour. An experiment by Grant (2024)[25] showed that participants made larger investments when they could execute trades using a swipe, versus a click, and when firm information was coloured green versus red. Moss (2022)[26] concluded that the way in which one specific trading app displays earnings information affected how investors incorporated that information in their trades.

23 See Ontario SC, Research Report, "Digital Engagement Practices in Retail Investing: Gamification & Other Behavioural Techniques", November 2022, available at: https://www.osc.ca/sites/default/files/2022-11/inv_research_20221117_gamification-of-retail-investing_EN.pdf

24 See FCA, "Research Note: Digital engagement practices: a trading apps experiment", 2024, available at: https://www.fca.org.uk/publications/research-notes/research-note-digital-engagement-practices-trading-apps-experiment

25 Stephanie M. Grant, Jessen L. Hobson, Roshan K. Sinha, 2023, Digital Engagement Practices in Mobile Trading: The Impact of Color and Swiping to Trade on Investor Decisions, available at: https://doi.org/10.1287/mnsc.2023.00379

26 Moss, 2022, How do Brokerages' Digital Engagement Practices Affect Retail Investor Information Processing and Trading? available at: https://austinsmoss.github.io/austinmoss.me/Moss_JMP_How-Do-DEPs-Affect-Retail-Investor-Information-Processing-and-Trading.pdf

2.4 - The impact of the use of DEPs on retail investor behaviour may depend on different factors

The impact of DEPs on investor behavior may depend on the type of DEPs that are used as well as characteristics of the investors, such as financial literacy and past experiences. In an experiment on a simulated trading platform carried out by the Experimental Economics Laboratory of Strasbourg University for the AMF (2023),[27] the academic research[28] found that achievement badges, information on the success of other traders, and the possibility to directly copy trades of others led to more risk-taking, whereas a visualisation of falling confetti and encouragement messages had no significant effect.

FCA (United Kingdom) conducted an RCT to evaluate the effect of four DEPs on retail trading behaviour in a simulated trading environment.[29] The four features were:

- **Flashing prices**: Real-time price changes being indicated with red and green flickers and directional arrows;
- **Push notifications:** Frequent pop-up messages about price movements;
- **Trader leaderboard:** A table of traders with the highest returns which participants could attempt to climb; and
- **Points & prize draw:** A lottery to which participants received an increased chance of winning if they traded more.

The FCA found that participants who received push notifications or were offered the points & prize draw increased the number of trades made, by 11% and 12% respectively. Push notifications and points & prize draw also increased the proportion of trades that were made in risky investments by 8% and 6%, respectively.

Subgroup analysis found that DEPs had a larger effect on certain sub-groups. In particular, those with low financial literacy increased their trading by more

27 AMF (2023). Experiment Report: Gamification and copy trading in finance. Available at: https://www.amf-france.org/en/news-publications/publications/reports-research-and-analysis/gamification-and-copy-trading-finance-experiment-full-report

28 See AMF, Report/Study, "Experiment Report: Gamification and copy trading in finance", November 2023, available at: https://www.amf-france.org/en/news-publications/publications/reports-research-and-analysis/gamification-and-copy-trading-finance-experiment-full-report

29 See FCA, "Research Note: Digital engagement practices: a trading apps experiment", 2024, available at: https://www.fca.org.uk/publications/research-notes/research-note-digital-engagement-practices-trading-apps-experiment

than those with high financial literacy in the presence of some DEPs (flashing prices and trader leaderboards).

In terms of gender behaviour and demographics, female participants increased their trading frequency by more than men in the presence of some DEPs (push notifications and points & prize draw), and younger participants (18-34) increased their end-of-trading portfolio riskiness by more than older participants (35+) across all DEPs (except flashing prices).

Chapkovski et al. (2023)[30] recruited participants for a simulated online trading platform designed for the purpose of the experiment. In the study, the effect of certain gamification elements, such as confetti and achievement badges, was primarily driven by self-selection: investors with lower financial literacy preferred a platform with these elements and traded over 20% more than investors who opted for a platform without gamification elements. Gamification elements did not lead to more trading mistakes.

Most studies so far have focused on the link between DEPs and investment decisions that are potentially harmful, such as excessively frequent trading and investing beyond one's risk appetite. However, as several reports point out, DEPs can also be employed to the benefit of investors (e.g., Chapkovski, 2023[31]; Quebec AMF, 2022[32]; Cato Institute, 2021[33]), similar to how behaviourally informed choice architecture and information design have been used to help consumers with other financial decisions regarding retirement saving, insurance, mortgages, and consumer credit (e.g., AFM, 2021[34]). Direct evidence on how DEPs may be used for the benefit of investors is sparse. However, according to an experiment by the AMF (2023)[35], in some cases DEPs helped retail investors to find their appropriate level of risk. Such experiment

30 Chapkovski, Philipp and Khapko, Mariana and Zoican, Marius, 2023, Trading Gamification and Investor Behavior, available at: http://dx.doi.org/10.2139/ssrn.3971868

31 Ibid

32 Quebec AMF (2022): Issues Paper: Insights into the risks and benefits of digital financial services for consumers. Available at: https://lautorite.qc.ca/fileadmin/lautorite/grand_public/publications/professionnels/doc-reflexion-consos-tech_an.pdf

33 See comment by CATO Institute on US SEC Broker-Dealer and Investment Adviser Digital Engagement Practices, Related Tools and Methods, and Regulatory Considerations and Potential Approaches; Information and Comments on Investment Adviser Use of Technology to Develop and Provide Investment Advice. Available at: https://www.sec.gov/comments/s7-10-21/s71021-9315859-260057.pdf

34 See AFM study, "AFM: gebruik gedragsinzichten om verstandige financiële keuzes te bevorderen", March 2021, available at: https://www.afm.nl/en/sector/actueel/2021/mrt/principes-consumentengedragsinzichten (in Dutch)

35 See AMF, "GAMIFICATION AND COPY TRADING IN FINANCE AN EXPERIMENT", November 2023, available at h https://www.amf-france.org/en/news-publications/publications/reports-research-and-analysis/gamification-and-copy-trading-finance-experiment-full-report

demonstrates how DEPs can potentially be used to the benefit of retail investors.

Regulatory Concerns Regarding the Disproportionate Use of DEPs Resulting in Poorer Financial Returns

The regulatory concern about trading frequency is based on research that has demonstrated that trading more - and so incurring more fees and being more likely to be impacted by behavioural biases – like selling winning investments whilst holding losing investments – leads to poorer financial returns.[36]

In an earlier study, the FCA[37] found an association between the number of DEPs on a trading app and the likelihood of users investing beyond their risk appetite and being at risk of problematic gambling behaviour.

[36] SHEFRIN, H. and STATMAN, M. 1985, The Disposition to Sell Winners Too Early and Ride Losers Too Long: Theory and Evidence, available at: https://doi.org/10.1111/j.1540-6261.1985.tb05002.x; Barber, B.M. and Odean, T., 2000, Trading Is Hazardous to Your Wealth: The Common Stock Investment Performance of Individual Investors, available at: https://doi.org/10.1111/0022-1082.00226; Barber, B.M. and Odean, T., 2013, The Behavior of Individual Investors, available at: https://doi.org/10.1016/B978-0-44-459406-8.00022-6; Antonio Gargano, Alberto G Rossi, 2018, Does It Pay to Pay Attention?, available at: https://doi.org/10.1093/rfs/hhy050

[37] See UK FCA, Research Articles, "Gaming trading: how trading apps could be engaging consumers for the worse", November 2022, available at https://www.fca.org.uk/publications/research-articles/gaming-trading-how-trading-apps-could-be-engaging-consumers-worse; UK FCA, Press Releases, "FCA keeps trading apps under review over gaming concerns", June 2024, available at: https://www.fca.org.uk/news/press-releases/fca-keeps-trading-apps-under-review-over-gaming-concerns; UK FCA, Research Note, "Digital engagement practices: a trading apps experiment", available at: https://www.fca.org.uk/publication/research-notes/research-note-digital-engagement-practices-trading-apps-experiment.pdf

CHAPTER 3: REGULATORY LANDSCAPE & RULES APPLICABLE TO USE OF DEPs BY MARKET INTERMEDIARIES

3.1 - Definitional considerations

No jurisdiction currently provides a legal definition of DEPs. As noted above, there are several common elements which can be drawn together to establish a common understanding of DEPs. The common elements of the descriptions of DEPs include some or all of the following:

- the use of technology or digital platforms;
- behavioural techniques or prompts, and
- use of differential marketing or customisation.

The following table presents some of the definitions or descriptions presented by IOSCO members:

TABLE 1

SOME DEFINITIONS OR DESCRIPTIONS OF DEPs	
JURISDICTION / REGULATOR	**Definition/Description**
Australia (ASIC)	ASIC outlined that DEPs include: • gamified incentives (e.g. prizes and giveaways); • social trading (e.g. finfluencer marketing, education communities and copy trading); and • the design of trading apps, websites and marketing materials.
Canada Quebec (QAMF)	The various engagement techniques used with retail investors in a digital environment.
EU jurisdictions (ESMA)	Digital engagement practices (DEPs) are defined as the tools including behavioural techniques, differential marketing, gamification, design elements or design features that intentionally or unintentionally engage

	with retail investors on digital platforms as well as the analytical and technological tools and methods[38]
The Netherlands (AFM)	All elements of an online choice environment[39] that could influence consumer behaviour.
United Kingdom (FCA)	The use of the term "DEP" is not extensively used in UK, although was referred to in recent FCA research[40]. UK typically refers to terms such as "nudge", "sludge" and "deceptive design (dark pattern)" rather than DEPs. The FCA had also used a defined term to denote that consumer harm may be occurring from the use of design features with *"design features of concern"*.
United States of America (SEC)	DEPs may include behavioural prompts, differential marketing, game-like features (commonly referred to as "gamification"), and other design elements or features designed to engage retail investors when using a firm's digital platforms (e.g., website, portal, app) for services such as trading, robo-advice, and financial education.[41]
National Futures Association (NFA) (USA)	Use of technological tools to attract retail investors to investing and encourage them to trade more frequently.

3.2 - Applicable legislation and rules

Building on the academic findings regarding the behavioural impact of DEPs, it is important to consider how these insights translate into regulatory frameworks. The use of DEPs by firms is subject to regulatory frameworks under existing jurisdictional laws and guidance that aim to ensure investor protection

[38] See ESMA, Discussion Paper, "MiFID II investor protection topics linked to digitalisation" para 83, December 2023, available at: ESMA35-43-3682_Discussion_Paper_on_MiFID_II_investor_protection_topics_linked_to_digitalisation)).pdf

[39] Referring to the environment in which consumers interact online.

[40] See FCA, "Research Note: Digital engagement practices: a trading apps experiment", 2024, available at: https://www.fca.org.uk/publications/research-notes/research-note-digital-engagement-practices-trading-apps-experiment

[41] See US SEC, Press Release, "SEC Requests Information and Comment on Broker-Dealer and Investment Adviser Digital Engagement Practices, Related Tools and Methods, and Regulatory Considerations and Potential Approaches; Information and Comments on Investment Adviser Use of Technology", August 2021, available at: https://www.sec.gov/newsroom/press-releases/2021-167

and market integrity. Several regulators cited sections within their local regulatory regimes, which can be used to protect consumers from harmful DEPs, such as rules that relate to online distribution, advertising and communications, and the use of technology such as AI and algorithms in the provision of services to consumers.

In this context, IOSCO members either:

- have a range of regulatory tools that can be applied to DEPs, which includes general rules used to address DEPs' challenges; and/or

- may consider potential development of DEPs-specific legislation and rules for market intermediaries.

As a general extraction from IOSCO survey findings, although not specific to DEPs, all jurisdictions have in place other legislation or rules that could be used to address misconduct relating to DEPs and marketing. Such rules relate to misleading or deceptive conduct; unconscionable conduct; obligations to provide financial services efficiently, honestly and fairly; and obligation to have adequate arrangements for the management of conflicts of interest, as reported in the following table, according to some of the responses received.

TABLE 2

LEGISLATION AND RULES APPLICABLE TO THE USE of DEPs BY MARKET INTERMEDIARIES	
JURISDICTION / REGULATOR	**Content of the legislation and rules**
Australia (ASIC)	The Australian legislative framework has in place rules on product governance, misleading and deceptive conduct, and unsolicited contact with retail investor (hawking provisions). These are: ➢ Design and distribution obligations - Corporations Act, Pt 7.8A: The design and distribution obligations are intended to help consumers obtain appropriate financial products by requiring issuers and distributors to have a consumer-centric approach to the design and distribution of products. In particular: • issuers must design financial products that are likely to be consistent with the likely objectives, financial situation and needs of the consumers for whom they are intended. • issuers and distributors must take "reasonable steps" that are reasonably likely to result in financial products reaching consumers in the target market defined by the issuer; and • issuers must monitor consumer outcomes and review products to ensure that consumers are receiving products that are likely

	to be consistent with their likely objectives, financial situation and needs. The design and distribution obligations require issuers and distributors to develop and maintain effective product governance arrangements across the life cycle of financial products to improved outcomes for consumers of these products. ➢ Misleading and deceptive conduct – ASIC ACT 2001, s12DA: A person must not, in trade or commerce, engage in conduct in relation to financial services that is misleading or deceptive or is likely to mislead or deceive. ➢ Hawking provisions - s992A and 992AA, Corporations Act: Under the hawking prohibition, a person must not, during, or because of, an unsolicited contact with a retail investor: • offer financial products for issue or sale; or • request or invite the retail investor to ask or apply for financial products. The objective of the prohibition is for consumers to have greater control over their decisions to purchase financial products—the prohibition allows them to determine how they want to be contacted and the kinds of financial products they are offered.
Brazil (CVM)	Some of the relevant legal provisions include: CVM RESOLUTION Nº 19, OF FEBRUARY 25TH, 2021, for the activity of investment advice. Section I - General Rules Art. 17. The provision of securities advisement service with the use of automated systems or algorithms is subject to the obligations and rules provided for in this Resolution and does not mitigate the responsibilities of the advisor regarding the guidance, recommendations, and advising performed. The source code of the automated system or algorithm must be available for inspection of the CVM at the company headquarters in an uncompiled version.
Canada (Canadian Securities Administrators and CIRO)	Registered firms are required to have a compliance system in place to provide reasonable assurance that the registered firm and each

	individual acting on its behalf complies with securities legislation. Securities legislation requires the registered firm: • to act fairly, honestly and in good faith with clients; • to identify and address material conflicts of interest in the best interests of clients; • to ensure that either an action taken for a client is suitable or, in the case of an order-execution-only platform, that the account is appropriate for the client; • prohibit any person or company from making statements that are untrue or omitting information that is necessary to prevent the statement from being false or misleading; • to provide certain disclosures with information that a reasonable investor would consider important about the client's relationship with the registered firm; and • to have a system of controls in place sufficient to provide reasonable assurance that the firm and each individual acting on its behalf complies with securities legislation and manage the risks associated with its business. Specific to conflicts of interest, registered firms are required to identify material conflicts of interest and address those material conflicts in the best interest of the client and avoid the conflict if it cannot be addressed in the best interest of the investor. These requirements apply to conflicts of interest that include or relate to the use of DEPs. Furthermore, if those DEPs relate to the use of specific marketing strategies or techniques, CSA and CIRO staff have published "Staff Notice 21-330 Guidance of Crypto Trading Platforms: Requirements relating to Advertising, Marketing and Social Media Use" to address issues raised in respect of advertising activities and marketing strategies by crypto trading platforms.
EU Jurisdictions (ESMA)	Among others, articles from 44 to 51 ("Information to clients and potential clients") of European Union (EU) Commission Delegated Regulation No. 2017/565 are relevant. Furthermore, European Union (EU) jurisdictions have product governance legislation and rules in place, applicable both to the manufacturers and to the distributors of financial products.[42] Product governance legislation and rules apply horizontally to all manufacturers

[42] See articles 16(3), 16(6) and 24(2) of the DIRECTIVE 2014/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 May 2014 on markets in financial instruments (so called, MiFID II); articles 9 and 10 of the COMMISSION DELEGATED DIRECTIVE (EU) 2017/593 of 7 April 2016; ESMA Guidelines on MiFID II product governance requirements (27 March 2023 ESMA35-43-3448).

	and distributors of financial products, regardless of DEPs usage by intermediaries. According to the product governance requirements introduced by the EU directive MiFID II financial instruments and structured deposits ("products") are only manufactured and/or distributed when this is in the best interest of retail investors. In accordance with Article 16(3) and 24(2) of MiFID II, firms that manufacture products for sale to retail investors or distribute products to retail investors shall maintain, operate and review adequate product governance arrangements. As part of these arrangements, a target market of end retail investors shall be identified and periodically reviewed for each product, and a distribution strategy must also be consistent with the identified target market. The MiFID II product governance requirements should therefore ensure that firms act in their retail investors' best interests during all stages of the product's life cycle. The EU intermediaries are also subject to European Union legislation as regards financial services contracts concluded at a distance.[43]
Hong Kong (SFC)	<u>For Securities:</u> Under section 300 of the Securities and Futures Ordinance ("SFO"), a person commits an offence if the person, directly or indirectly, in a transaction involving securities: (i) employs any device, scheme or artifice with intent to defraud or deceive, or (ii) engages in any act, practice of course of business which is fraudulent or deceptive, or would operate as a fraud of deception. Under sections 107 and 108 of the SFO, a person commits an offence (civil and/or criminal) if the person makes any fraudulent misrepresentation or reckless misrepresentation or negligent misrepresentation to induce others to invest in securities, structured products or CIS. The disclosure of false or misleading information inducing transactions may constitute market misconduct which is subject to civil or criminal liability under the SFO; <u>For Virtual Assets:</u>

[43] See the DIRECTIVE (EU) 2023/2673 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 22 November 2023 amending Directive 2011/83/EU as regards financial services contracts concluded at a distance.

	For Virtual Assets, the equivalent provisions of the above can be found in Under section 53ZRF and 53ZRG of the Anti-Money Laundering and Counter-Terrorist Financing Ordinance ("AMLO"). SFC (Hong Kong) have specific rules applicable to Online Platforms operated by intermediaries. According to the Online Distribution Guidelines and related FAQs in respect of the posting of any advertisement, research report and other investment product-specific materials on their Online Platforms, Platform Operators should note in particular, but without limitation, the following requirements relevant to the issue of such materials: 1. The issue of advertisements in respect of investment products is regulated under the SFO. Certain misrepresentations made by a person may attract civil and/or criminal liability and the disclosure of false or misleading information inducing transactions may constitute market misconduct which is subject to civil or criminal liability under the SFO. • The contents of advertisements must also comply with relevant advertising guidelines, offer awareness guidelines, marketing materials guidelines and/or SEHK Listing Rules where applicable. • The requirement to ensure that advertisements do not contain information that is false, biased, misleading or deceptive. • For research reports, the conflicts of interest requirements and the applicable requirements under paragraph 16 (Analysts) as well as the General Principles of the Code of Conduct; and • The requirement to act with due skill, care and diligence in expressing any opinion.
Japan (FSA)	The Financial Instruments Exchange Act (FIEA) has restrictions on how market intermediaries can market their products in general. For Crypt Asset Service Providers (CASPs), the Payment Services Act (PSA) also has a list of restrictions on the prohibited acts in relation to marketing.
Kuwait (CMA)	In article 1-27 (CMA bylaw), duties of the Investment Advisor include, but are not limited to, the following: 1. Evaluating securities. 2. Providing consultation, issuing reports and analyses for others or through the media and means of communication in relation to one or more activities that include but not limited to the following: a. Invest, purchase or sale of Securities and investment products. b. Subscribe, offer, issue or list Securities. c. Practice any right attached to the possession of Securities. In addition to providing any consultation or advice that may affect investors' or potential investors'

	decisions in disposing Securities and investment products. 3. Providing Digital Financial Advisory services.
Mexico (CNBV)	Fintech Law and other provisions in specific sections, such as the Investment Services Provisions, regulate the websites of Financial Institutions.
Nigeria (SEC)	Advertisements and marketing materials are required to be truthful and not misleading. The use of models, celebrities, fictional characters, etc. is prohibited. Market intermediaries are not to employ manipulative or deceptive devices and contrivances. Rules 97, 284 SEC Rules.
Singapore (MAS)	Regulation 46, 46AA, 46AC and 46AD of the Securities and Futures (Licensing and Conduct of Business) Regulations set out requirements for advertisements ("Advertisement Rules"), which apply to all licensed intermediaries regardless of the medium utilised for the advertisements. a) Under the Advertisement Rules, licensed intermediaries are required to ensure, amongst others, that – b) the advertisements are not false or misleading. c) all product advertisement, amongst others, is presented in a clear manner, provides a fair and balanced view of the capital markets products, and is approved by the senior management of the licensed intermediaries. all non-product advertisement does not contain, amongst others, any exaggerated statement which is calculated to exploit an individual's lack of experience or knowledge. In addition, in a manner that is commensurate with the nature, scale and complexity of their business, the licensed intermediaries are also required to, amongst others – a) implement, and ensure compliance with, effective written policies on advertisement; and b) put in place compliance function and arrangements to ensure compliance with the Advertisement Rules
Spain (CNMV)	National regulation on marketing communications.
Thailand (SEC)	Firms that use algorithms to provide retail investor service have defined supervisory duties for personnel, such as: (a) the board of directors or senior executives recognize and approve the policy for using technology to provide retail investor services, including evaluating the overall process and risk management; and (b) a designated person must know and understand the technology or algorithms used, which can realize

	rationale, principles, and risk.[44] As a result, any use of DEPs to provide services to retail investors requires securities companies to ensure that it is in the best interest of the retail investors.
The Netherlands (AFM)	Besides the rules and regulation on product governance and provision of information, there is a general duty of care for financial service providers (4:24 Wft (Financial Supervision Act)). It states that a financial service provider must carefully consider the legitimate interests of a consumer or beneficiary. The AFM can only intervene in the event of obvious abuses. Based on the Unfair Commercial Practices Act (in Dutch: Wet oneerlijke handelspraktijken), the AFM has the task of monitoring compliance with consumer rules. In specific cases, the AFM could use the Unfair Commercial Practices Act, to intervene.
Türkiye (CMBT)	The first article of the Capital Market Law states the purpose of the Law as; to regulate and supervise capital markets to ensure the functioning and development of the market in a reliable, transparent, efficient, stable, fair and competitive environment and to protect the rights and interests of investors.
United Kingdom (FCA)	Legislation under section 21 of Financial Services and Markets Act 2000 (FSMA), known as the financial promotion restriction. Authorised persons must comply with rules when communicating or approving financial promotions. For investment business there are rules in the COBS section of the FCA handbook regarding communications with retail investors or prospective retail investors. This includes rules that require that communications are fair, clear and not misleading and fairly provide information about the risks where there are benefits referenced, can be understood by the average member of the group that is directed to or those that are likely to receive it. The Consumer Duty Consumer Understanding outcome also places requirements on firms to ensure their communications support consumer understanding to meet their information and inform their decision making. For firms in scope of the product governance regime (PROD in the FCA handbook) applies, and the Consumer Duty rules also set several relevant cross-cutting obligations, and outcomes that firms must meet for their products and services. The Consumer Duty requires firms to act in good faith towards retail investors as a cross-cutting obligation, and there is guidance in the rules which calls out that manipulating and exploiting retail investors behavioural biases or emotions to mis-led or create demand would be an example of not acting in good faith. The design of the product must not adversely affect group of retail investors in the target market, including retail investors with characteristics of vulnerability. FCA would generally expect this would include assessing

[44] Notification of the Office of the Securities and Exchange Commission Sor Thor. 30/2561.

	and if appropriate testing how the use of DEPs could impact different retail investor segments. The FCA's Consumer Duty considers intermediaries to be manufacturers of a service, which would put a broader set of obligations on them than PROD when using DEPs. Rules also exist generally for financial promotions to ensure they are fair, clear, and not misleading.
United States of America (SEC/FINRA)	In addition to the regulations discussed in the table below, broker-dealers and investment advisers are currently subject to extensive obligations under this jurisdiction's federal securities laws and regulations, and in the case of broker-dealers, rules of self-regulatory organizations ("SROs") (in particular, the Financial Industry Regulatory Authority, Inc. ("FINRA").[45] Existing Broker-Dealer Obligations: Under the anti-fraud provisions of the federal securities laws and SRO rules, broker-dealers are required to comply – among others - with the following rules: • Communications with the Public Rules. Broker-dealers are subject to several rules governing communications with the public, including advertising or marketing communications. These rules apply to broker-dealers' written (including electronic) communications with the public and are subject to obligations pertaining to content, supervision, filing, and recordkeeping. All communications must be based on principles of fair dealing and good faith, be fair and balanced, and comply with a number of other content standards. Through its filings review program, FINRA's Advertising Regulation Department reviews communications submitted either voluntarily or as required by FINRA rules. In the case of communications relating to options, broker-dealers are subject to certain heightened obligations. • Disclosure Obligations. Broker-dealers are subject to a number of customer disclosure obligations. • Supervision Obligations. Broker-dealers must "establish and maintain a system to supervise the activities of each associated person that is reasonably designed to achieve compliance with applicable securities laws and regulations, and with applicable FINRA rules." Existing Investment Adviser Obligations: The Investment Advisers Act of 1940 ("Advisers Act") establishes a federal fiduciary duty for investment advisers, regardless of whether they

[45] FINRA rules only apply to broker-dealers that are members of FINRA.

	are registered with the U.S. SEC, which is made enforceable by the anti-fraud provisions of the Advisers Act. The fiduciary duty is broad and applies to the entire adviser-client relationship and must be viewed in the context of the agreed-upon scope of that relationship. Rules adopted under the Advisers Act also impose various obligations on registered investment advisers (and investment advisers required to be registered with the U.S. SEC), including, among others: • Disclosure Requirements. Registered investment advisers are subject to a number of client disclosure obligations, including disclosures that must be provided before or at the time of entering into an advisory contract, annually thereafter, and when certain changes occur. • Compliance Programs. Under rule 206(4)-7, a registered investment adviser must adopt and implement written policies and procedures reasonably designed to prevent violation of the Advisers Act and the rules thereunder by the firm and its supervised persons. • Supervision Obligations. Registered investment advisers have a duty to reasonably supervise certain persons with respect to activities performed on the adviser's behalf.

Moreover, some jurisdictions have a full set of rules in relation to how financial products are marketed and distributed to retail investors by market intermediaries using DEPs.

3.3 - Potential development of DEPs-specific guidance for market intermediaries

Most responding regulators do not have rules applicable to market intermediaries that are specific to the use of DEPs; however, as noted above, they have other existing rules that apply to market intermediaries and their activities, including potentially the use of DEPs by such intermediaries. Hence, IOSCO has discussed with its membership to analyse the need for global guidelines for DEPs and the benefits and challenges thereof. Below are some of the important IOSCO membership feedback, highlighting the pros/cons in this regard:

- Several regulators (CMA/Kuwait, CNBV/Mexico, CMBT/Turkey, CONSOB/Italy, FCA/UK, OSC/Canada, SEC/Nigeria, MAS/Singapore) would favour the development of global guidance. As noted by one regulator (CVM Brazil), this could be challenging, given the limited information and understanding regarding the effects and practices associated with the use of DEPs in the financial market within the concerned jurisdiction.

- AFM (NED) believe that regulation should focus on promoting that DEPs are used in the best interest of the consumer (positive steering) instead of banning the use of (specific) DEPs.

- According to the FCA (UK), their rules under Consumer Duty should shift the approach of firms in how they design their products/services, sufficiently test these products/services throughout their lifecycle and monitor the outcomes that retail investors receive. This should lead to better practice for the use of DEPs but will require more testing of firm approaches to these new requirements.

- The UK FCA's approach under the Consumer Duty is to focus on this outcomes-based regulation, including for DEPs. Where poor outcomes are identified, the FCA expects firms to be proactive in resolving these. In this regard, the FCA has identified possible improvements, requirements, limitations, or prohibitions that would reduce potential harm to retail investors from a specific DEP or DEPs in general. The Consumer Duty principles require firms, among other things, to avoid foreseeable harm, act in good faith and to consider how products and services impact different groups of retail investors and retail investors with characteristics of vulnerability.

- The types of actions that firms should consider to meet their obligations under the Consumer Duty include:

  1) knowing their retail investor base better, for example using indicators regarding a retail investor's ability to bear losses or a retail investor's expected trading activity;
  2) where problematic retail investor behaviour is identified (through activity monitoring or otherwise), to take appropriate action;
  3) removing "gamification" techniques which may exploit retail investor biases.

- According to CONSOB (Italy), considering the quick pace of technology developments also in the area of the provision of investment services, it would seem appropriate to consider if/what additional specific rules could be implemented to ensure that investors continue to benefit from an adequate level of protection in this fast-evolving environment. Given the possibility for DEPs to be used on a cross-border basis, CONSOB see merit in developing a consistent and coordinated approach from all competent Authorities potentially involved.

- Although supportive of global guidance, OSC (Canada) believe that specific prohibitions and requirements relating to the use of DEPs may quickly become outdated. Existing investor protection measures apply equally to activities conducted digitally and those conducted through other more traditional means. Thus, OSC feel that a principles-based and technology neutral approach of applying existing rules would address many of the concerns.

- OSC's approach seems consistent with the one expressed by ESMA in its technical advice to the European Commission regarding digital disclosures.[46] ESMA conclusion is that the overarching principles set by the MiFID II legislative framework apply to the provision of investment and ancillary services irrespective of the channel and the communication means. The evolving nature of different forms of interaction between firms and their retail investors or potential retail investors suggest not to crystallise changes at the legislative level and rather rely on more flexible "Level 3" guidance (i.e., guidelines and Q&As).

3.4 - IOSCO Members' rules and initiatives related to DEPs

Various IOSCO members have reported a rise in the use of DEPs by market intermediaries to interact with retail investors. In addition to research mentioned above, some IOSCO members have conducted research, launched public consultations or issued guidance and recommendations to better identify the challenges raised by DEPs and address them more effectively.

The US SEC

For example, the US SEC issued in August 2021 a request for information and public comment on topics related to the use of DEPs by broker-dealers and investment advisers, among other things. In this information request, the US SEC noted that when interacting with retail investors via digital platforms, broker-dealers and investment advisers use a range of DEPs. Through this initiative, the SEC aimed, in part, to develop a better understanding of market practices associated with the use of DEPs by firms, to facilitate the assessment of existing regulations and to determine whether regulatory action was warranted.[47]

[46] 29 April 2022 | ESMA35-42-1227, page 45.

[47] See US SEC, "Request for Information and Comments on Broker-Dealer and Investment Adviser Digital Engagement Practices, Related Tools and Methods, and Regulatory Considerations and Potential Approaches; Information and Comments on Investment Adviser Use of Technology to Develop and Provide Investment Advice", August 2021, available at: https://www.sec.gov/files/rules/other/2021/34-92766.pdf

In July 2023, the US SEC proposed new rules that would require broker-dealers and investment advisers (collectively, "firms") to take certain steps to address conflicts of interest associated with their use of predictive data analytics and similar technologies to interact with investors to prevent firms from placing their interests ahead of investors' interests.

A subcommittee of the Investor Advisory Committee for the US SEC released draft recommendations regarding DEPs in December 2023, which were updated in February 2024 and approved by the Investor Advisory Committee in March 2024.[48] The subcommittee observed that whereas DEPs have increased investors' participation in the securities markets, they have also raised new challenges regarding the need to adequately inform and protect those investors. Various recommendations were provided to the US SEC and USA's Financial Industry Regulatory Authority (FINRA) so that they can better address the challenges raised by DEPs.

ESMA

The European Securities and Markets Authority (ESMA) released a call for evidence on certain aspects relating to retail investor protection in October 2021.[49] In this call for evidence, ESMA noted that the COVID-19 pandemic has accelerated the digitalization of financial services. ESMA also asked for contributions related to the appropriateness of the current regulatory framework about digital tools and channels and welcomed input on the impact of information shared on social media on retail investors' behavior.

ESMA stated that, while the use of gamification techniques can help to convey complex information in a simple and rewarding way, the wrong use of these techniques can push investors to take actions based on emotions rather than through rational decisions.

ESMA released a discussion paper on various topics related to the protection of investors in the context of the digitalization of financial markets[50] in

[48] Disclosure Subcommittee of the Investor Advisory Committee of the Securities and Exchange Commission, "Recommendation of the SEC Investor Advisory Committee's Disclosure Subcommittee Regarding Digital Engagement Practices", available at: https://www.sec.gov/files/approved-20240214-draft-recs-use-dep.pdf. See also US SEC Staff, "Prepared Remarks Before the Investor Advisory Committee", March 2022, available at: https://www.sec.gov/news/speech/gensler-iac-2022-03-10 and US SEC Staff, "Remarks on Digital Engagement Practices, before the Investor Advisory Committee (IAC)", December 2023, available at: https://www.sec.gov/news/speech/lizarraga-remarks-iac-20231207. These publications represent the views of the authors. They are not rules, regulations, or statements of the US SEC.

[49] On February 17, 2021 ESMA also issued a Statement urging retail investors to be careful when taking investment decisions based exclusively on information from social media and other unregulated online platforms, if they cannot verify the reliability and quality of that information, available at: https://www.esma.europa.eu/sites/default/files/library/esma70-155-11809_episodes_of_very_high_volatility_in_trading_of_certain_stocks_0.pdf

[50] See ESMA, Discussion Paper, "MiFID II investor protection topics linked to digitalisation" para 83, December 2023, available at: https://www.esma.europa.eu/sites/default/files/2023-12/ESMA35-43-3682_Discussion_Paper_on_MiFID_II_investor_protection_topics_linked_to_digitalisation.pdf

December 2023. In this discussion paper, ESMA seeks comments on these various topics, which include DEPs and gamification.

Ontario Securities Commission (Canada)

The Ontario Securities Commission (OSC) released a staff notice on DEPs in retail investing[51] in November 2022. The OSC stated in this staff notice that it has seen a wave of digital mobile-friendly investing platforms that employ DEPs. The notice also looked at how investor conduct is influenced by gamification and other behavioral techniques. This involved assessing the impact of two gamification techniques on investing behaviors in a simulated trading environment. The OSC staff notice included recommendations that the OSC and other regulators gather more data on the impact of different behavioral techniques on retail investors behaviors and decisions, and that regulators seek to leverage data collected by digital investing platforms.

The CFA Institute

The CFA Institute published in November 2022 a report regarding gamification in the capital markets.[52] In this report, the CFA Institute noted that gamification and other behavioral techniques are being used increasingly in the financial services sector. The CFA Institute also outlined several recommendations aimed at regulators and industry stakeholders on how they could shape their approach to address the challenges raised by gamification.

TABLE 3

CONSULTATIONS/PUBLICATIONS ON DEPs BY SOME IOSCO MEMBERS	
JURISDICTION / REGULATOR	**Summary of research**
Canada (Ontario Securities Commission) (OSC)	November 2022: OSC's staff notice on DEPs in retail investing. A wave of digital mobile-friendly investing platforms that employ DEPs was observed. The notice also looked at how investor conduct is influenced by gamification and other behavioral methods and included recommendations that the OSC and other regulators gather more data on the impact of different behavioral techniques on retail

51 See Ontario Securities Commission, "OSC Staff Notice 11-79 – Digital Engagement Practices in Retail Investing: Gamification and Other Behavioural Techniques", November 2022, available at: https://www.osc.ca/sites/default/files/2022-11/sn_20221117_11-796_gamification-report.pdf

52 See CFA Institute, "Fun and Games: Investment Gamification and Implications for Capital Markets", November 2022, available at: https://rpc.cfainstitute.org/-/media/documents/article/industry-research/investment-gamification-implications.pdf

	investors behaviors and decisions, and that regulators seek to leverage data collected by digital investing platforms. February 2024: The OSC issued a research report “Digital Engagement Practices: Dark Patterns in Retail Investing” that examined the use of dark patterns, dark nudges, sludge and targeted advertising and how those techniques are being used by online trading platforms.[53]
EU jurisdictions (ESMA)	October 2021: ESMA’s call for evidence on certain aspects relating to retail investor protection. ESMA stated that, while the use of gamification techniques can help to convey complex information in a simple and rewarding way, the wrong use of these techniques can push investors to take actions based on emotions rather than through rational decisions. December 2023: ESMA’s discussion paper on various topics related to the protection of investors in the context of the digitalization of financial markets, including DEPs and gamification.
Global (CFA INSTITUTE)	November 2022: report regarding gamification in the capital markets. The report noted that gamification and other behavioral techniques are being used increasingly in the financial services sector. The CFA Institute report encompasses recommendations on how regulators and industry stakeholders could shape their approach to address the challenges raised by gamification.
United States of America (SEC)	August 2021: US SEC request for information and public comment on topics related to the use of DEPs, to develop a better understanding of market practices associated with the use of digital engagement practices by firms. March 2024: US SEC’s Investor Advisory Committee subcommittee recommendations regarding DEPs approved by Investor Advisory Committee. The subcommittee observed that whereas DEPs have increased investors’ participation in the securities markets, they have also raised new challenges regarding the need to adequately inform and protect investors.

[53] See https://www.osc.ca/sites/default/files/2024-02/inv-research_20240223_dark-patterns.pdf

CHAPTER 4: BENEFITS & RISKS ASSOCIATED WITH THE USE OF DEPs

4.1 - Benefits

DEPs may be used in ways that benefit retail investors. For instance, DEPs may promote enhanced portfolio diversity and increase retail investors' participation in the financial markets, while also encouraging the development of their financial literacy and helping them to set and monitor progress towards long-term retirement savings goals.[54]

The following table provides some examples of the benefits of DEPs observed by some IOSCO members:

TABLE 4

DEPs POTENTIAL BENEFITS	
Jurisdiction/Regulator	**Observed potential benefits**
Australia (ASIC)	DEPs, where orders are placed for the retail investor automatically based on the retail investor's own parameters, might be useful. This kind of DEP has the potential to help retail investors reach their investment goals faster and drive positive investing habits.
Canada Quebec (AMF)	DEPs may benefit retail investors, including the promotion of sound financial behaviours and heightening of investor's vigilance toward frauds and scams. By nudging investors to take actions, DEPs may help consumer break poor financial habits.
The Netherlands (AFM)	DEPs may benefit retail investors. Examples observed by the AFM include the use of chatbots or the use of defaults to prevent retail investors from defaulting to the riskiest option can be beneficial for retail investors.

[54] See Ontario Securities Commission, "OSC Staff Notice 11-79 – Digital Engagement Practices in Retail Investing: Gamification and Other Behavioural Techniques", November 2022, available at: https://www.osc.ca/sites/default/files/2022-11/sn_20221117_11-796_gamification-report.pdf

United Kingdom (FCA)	In-app educational materials; help or feedback functionality; visualisations, graphs and examples to show costs or returns over time can be presented in a simplified manner; risk warnings can be displayed clearly.

Comments received during the consultation of this Report highlighted other potential benefits of DEPs, especially regarding the use of “nudges”, or prompts to investors.

First, one respondent noted that retirement calculators and models may assist investors in saving for retirement. Second, this respondent noted that portfolio monitoring tools could monitor an investor’s accounts for excess cash that could be applied to a savings goal set by the investor, or help investors monitor their portfolios for concentration risk. If one of these scenarios was identified, a prompt could be sent to the investor. This respondent noted that these types of DEPs provide investors with important information from a reliable, trusted, and qualified source, while also helping retail investors avoid the cognitive biases of inertia and familiarity.

This same respondent noted that DEPs may provide access to time-sensitive information. For example, DEPs could be used for communications to inform investors about margin calls, upcoming maturity dates, and security issues.

Another respondent stated that other potential benefits of DEPs could include nudges related to employer matches of retirement accounts, as well as nudges reminding investors to save for retirement. In addition, DEPs could be used to provide education to recently onboarded investors. Finally, this respondent noted that DEPs could also be used to identify clients with an interest in managed services, which could potentially improve investor outcomes over time by creating an investment plan aligned with an investor’s attitude to risk and a portfolio of investments aligned with their financial goals.

4.2 - Risks

However, in many circumstances, the growing use of DEPs, often coupled with other digital features/practices like AI & ML, marketing by finfluencers, and copy trading, may also result in retail investor harm.

According to research conducted by some regulators and based on members’ feedback, DEPs may potentially present the following risks:

Lack of disclosure and information asymmetries

Leaderboards, copy trading and differentiated marketing may promote risky or complex products that may be cross-sold and presented to retail investors as simple and profitable.

Misleading or deceptive disclosures

Leaderboards and rankings may mislead/misguide retail investors about their expertise level, strategies, products traded, risk-adjusted returns, past returns, incentives and performance benchmarks/targets.

Increased trading frequency by Retail Investors

The incentivization mechanism may lead to the use of DEPs encouraging retail investors to trade more frequently to the benefit of the firm when it may not be in investors' best interest to do so, therefore creating a potential conflict of interest between the firm and the investor. Hence, retail investors may also invest in products that may be unsuitable for them, may be steered by the intermediary to products that are more profitable to the intermediary, or change their investment strategy without full consideration or awareness of the risks involved.[55]

Absence or deficiency in the maintenance of the technology used, with possible detrimental effects on retail investors (technology-related risks)

Market intermediaries using DEPs may not be able to properly manage and maintain the technology supporting the DEPs to ensure that technology and the related DEPs do not place the interests of the market intermediary above the interests of retail investors.

Failure of market intermediaries to understand the DEPs used by them and data quality (technology-related risks)

DEPs may be based on complex or outsourced technologies and market intermediaries may not be able to adequately evaluate the quality of the data on which the technology relies. Consequently, market intermediaries may not be able to adequately understand or there might be explainability problems as regards to why DEPs are promoting certain products to retail investors.

Data Confidentiality Concerns Regarding the Collection of Data

DEPs may gather data from retail investors to be used for more frequent marketing activity and there might be data confidentiality concerns around the safeguarding of this data. Some respondents to the Consultation Report also stated a concern that the use of DEPs could make a firm more vulnerable to cyberattacks like data breaches, phishing, or ransomware.

55 See FCA, "Research Note: Digital engagement practices: a trading apps experiment", 2024, available at: https://www.fca.org.uk/publications/research-notes/research-note-digital-engagement-practices-trading-apps-experiment

Lack of proper due diligence in online selling, marketing practices, and onboarding

Market intermediaries that have online trading platforms with poor product design and inadequate corporate governance frameworks may fail to have safeguards in place to avoid aggressive distribution and marketing practices, especially when promoting high-risk financial products. Furthermore, inadequate onboarding practices of market intermediaries for retail investors may result in failures in monitoring target market compliance and in investor complaints, and while not an obligation, may not enable the market intermediary to have a clear vision of retail investor losses or turnover, which would allow the firm to take action where required under jurisdictional regulatory frameworks.

CHAPTER 5: CURRENT GLOBAL STATE OF PLAY IN THE USE OF DEPs

5.1 - Increasing use of DEPs by market intermediaries

In recent years, mobile apps and websites used by market intermediaries have become increasingly digitalized. Various factors are in play on both the supply and demand sides.

On the demand side, multiple factors, most of which emerge from technological developments, seem to have led many retail investors to manage their finances through online applications and websites. Today, retail investors are engaging with a wide range of online trading platforms and apps offering quick and easy access to many types of products including equities, complex retail OTC leveraged products and cryptocurrencies.

On the supply side, firms are using a range of DEPs in the marketing and distribution of financial products and services to retail investors. DEPs are a key tool for providers to attract retail investors, keep those retail investors engaged and to influence retail investor behaviour and decisions, whether intentionally or unintentionally. Additionally, recent growth in artificial intelligence (AI) & machine learning (ML) may mean the increased deployment of such technologies in the design and implementation of DEPs to engage with retail investors.

5.2 - Types of DEPs being used by market intermediaries

Retail investors who use online trading platforms and mobile applications are increasingly exposed to a wide range of DEPs. The broad categories of DEPs used by market intermediaries may include, among others:

- Gamified incentives, e.g. games, streaks, contests with prizes, giveaways and celebrations for trading;
- Copy/mirror/social trading and networking, education communities and leaderboards;
- Online trading app design and websites;
- Differential marketing; and
- Nudging techniques, such as notifications and some types of goal and progress feedback.

As highlighted, the growth in the use of AI & ML merits some careful consideration, as it can result in an increase in the speed of distribution of DEPs. IOSCO believes that it is a best practice for regulators to keep pace with the developments in DEPs and fine-tune their technology infrastructure and regulatory approach due to the increasing use of DEPs by firms in their online distribution and marketing efforts. One specific possible regulatory/legal challenge for IOSCO members in the future would be to prove the causation between DEPs and retail investor harm, if retail investor harm occurs because of product offerings/trading that is facilitated via use of DEPs by market intermediaries.

Table 5 below ranks the most commonly observed DEPs by IOSCO members in their respective jurisdictions. Complementary to Table 5, Table 6 then ranks the prevalence of the DEPs from Table 5 observed by members in their jurisdiction. Note that some regulators do not consider all the options listed in the tables below to be DEPs. See Table 1 for a list of jurisdictional definitions or descriptions of DEPs.

TABLE 5

TOP 10 OBSERVED DEPs	
Type of DEP	**Observed**
Websites, portals and applications or “apps”	10.3%
Notifications	9.0%
Social networking tools	9.0%
Most popular or top stocks (social norms)	6.5%
Contests with prizes	5.8%
Chatbots	5.2%
Subscriptions and membership tiers	5.2%
Behavioural prompts	4.5%
Leaderboards	4.5%
Differential marketing	4.5%

TABLE 6

TOP 10 PREVALENCE OF DEPs	
Type of DEP	**Prevalence**
Websites, portals and applications or “apps”	14.0%
Contests with prizes	10.0%
Social networking tools	10.0%

Behavioural prompts	8.0%
Notifications	8.0%
Chatbots	6.0%
Most popular or top stocks (social norms)	6.0%
Leaderboards	6.0%
Badges	4.0%
Subscriptions and membership tiers	4.0%

5.3 - Use cases by market intermediaries

In their response to the IOSCO survey, regulators have identified a wide range of DEPs use cases (over 20). Table 7 reports the top 10 DEP uses cases ranked by IOSCO member regulators.

TABLE 7

DEPs USE CASES	
DEP use cases	**Ranking by most observed**
Accounts openings	8.8%
Online Trading	7.2%
Increasing engagement with the app or platform	4.1%
Retail investor education	2.2%
Funding of accounts[56]	1.7%
Retail investor onboarding and account openings	1.7%
Trigger behaviour changes to trade more or trigger a call to action	1.3%
Increasing trading frequency	1.0%
Account management through app	0.7%

[56] Funding accounts offer investors to start trading without making an initial deposit. The deposit is provided by a third-party. This makes this practice risky for retail investors.

Cross-selling of risky products[57]	0.5%

Examples of use cases identified by one regulator during a review of DEPs are set out below.

Practical example from regulator - Use case - Online Trading - ASIC (Australia)

"In our review we found that the DEP use case for 'trading (online)' involved practices which were designed to induce investors to trade more frequently. This practice had the potential to result in excessive trading ("churning") and was accompanied by active promotion of low-cost trading and zero brokerage, which had the potential to mask the true cost of trading. We believe this was creating a conflicted business model, which was likely to contribute to poor retail investor outcomes.

Furthermore, the marketing campaign material we have reviewed the language included:

- "push the retail investor to purchase"
- "encourage existing retail investors to increase their trading volumes"
- "move them from consideration to action"
- "drive habitual behaviour change"
- "make investing front of mind"

Whilst establishing the causal link between the DEP types (and their associated use cases), and increased trading by targeted retail investors is a challenge (and is a focus for us in 24/25 FY), in the example above, we are actively testing the application of certain areas of our law, such as the ones related to "misleading or deceptive conduct" and "providing financial products and services efficiently, honestly and fairly", to take action to address misconduct".

As noted above, comments received during the consultation of the Report highlighted other use cases for DEPs, especially regarding the use of tools and prompts to investors.

First, one respondent noted that retirement calculators and models may assist investors in saving for retirement. Second, this respondent noted that portfolio monitoring tools could monitor an investor's accounts for excess cash that could be applied to a savings goal set by the investor, or help investors monitor their portfolios for concentration risk. If one of these scenarios was identified, a communication ("nudge") could be sent to the investor.

57 Cross-selling practice means the offering of an investment service together with another service or product as part of a package or as a condition for the same agreement or package (in this sense, EU Directive 2014/65, art. 4, point (42)).

This same respondent noted that "nudges" could be used for communications to inform investors about margin calls, upcoming maturity dates, and security issues.

Another respondent stated that other use cases could include nudges related to employer matches of retirement accounts, as well as nudges reminding investors to save for retirement.

5.4 - Personalisation and tailoring of DEPs

Some IOSCO members have observed personalisation or tailoring by firms of DEPs by using retail investor data. Such personalisation and tailoring include the use of risk profiling to display tailored product lists to those retail investors.

Practical example from regulator – Personalisation in use of DEPs - One regulator has observed the following:

"We have observed certain firms shortlist and display a tailored list of products for retail investors, e.g. "product of risk rating X or below may suit you or match your risk tolerance level" or "these products may suit you or match your risk tolerance level" immediately after the retail investors completed their risk profiling exercises".

Other observed personalisation practices used by firms include:

- Third party behavioural science techniques combined with sophisticated analytics (sometimes using AI/ML) to profile investors to design DEPs to influence their behaviour, [ASIC (Australia)]
- Limiting the options that a retail investor has available when copy trading. That is, the retail investor's suitability assessment is used to restrict the array of lead traders a retail investor can copy. [FCA (United Kingdom)]
- Using a DEP to tailor services offered to investors such as account opening and trading triggers based on investor information from chatbots [CMB (Turkey)]
- Different online choice environments provided by firms considering different types of investors. [AFM (The Netherlands)].

Most examples of DEPs referenced were in connection with a potentially harmful conduct, such as influencing the frequency of trading or trading in riskier products.

That being said, the FCA noted two examples where DEPs were used by firms for positive retail investor outcomes:

Practical example from regulator – Using DEPs for positive retail investor outcomes - FCA (United Kingdom).

We are aware of firms that are pro-actively reaching out to consumers (through banner notifications) when it appears that retail investors are displaying potentially problematic or erratic trading behaviour (e.g., gambling-type). The firm can send access to helpful materials to help prevent gambling-type behaviour or even, with the user's discretion, blocking access the app".

"We're aware of some firms that have sent e-mails to retail investors with a significant level of cash in their stocks and shares individual savings account (ISA), with the intention of reducing the amount of money they hold in cash. We're also aware of firms that have sent notifications to consumers to encourage them to consider diversifying their portfolio if they are invested entirely in one asset class.

5.5 - Demographics and investor profile/characteristics in DEPs targeting

Some regulators noted that firms that used DEPs had a younger retail investor demographic. For example, the FCA noted that the average retail investor age on trading app firms that are extensively using DEPs is around 30 years old, compared to investment platforms that do not use DEPs – or use minimal DEPs – of around 40 years old.

A few regulators also noted that firms are using DEPs to market their business and proposition as different than others to differentiate themselves from other firms in a competitive environment and to attract particular demographics and profiles of retail investors.

Practical example from regulator 1 – Point of difference marketing - ASIC (Australia)

"Beyond age groups, we observed that intermediaries often had different narratives to describe their business to position themselves to have different value propositions and points of difference to appeal to certain types of consumers due to the highly competitive market with so many new entrants.

One neo-broker stated that they designed their marketing campaigns (which included the use DEPs) to attract minority groups, including women. This neo-broker mentioned that they feel minority groups were traditionally left out of trading.

Another intermediary stated that they targeted investors seeking access to the US market, which by virtue of this characteristic, was a younger more digitally savvy audience".

Practical example from regulator 2 – Retail investor profiles and differentiated marketing of services and products - CSRC (China)

"A major difference between different brokerages comes from their brand image and service specialties, leading to variations in their retail investor base. Some brokerages excel in serving high-net-worth retail investors, giving rise to wealth management digital products, FOF (Fund of Funds) services, and investment research support tailored for these retail investors. Others are adept at mass retail business, generating convenient trading options and low-cost digital services for this type of retail investor".

5.6 - Use of DEPs & Provision of investment services

The use of DEPs may have certain tangential elements that equate to the provision of investment services, which may require specific authorisation. In certain jurisdictions this is particularly relevant for the potential interactions of DEPs with investment advice rules. Regarding this observation, the responding regulators were split, as reported in the following table.

The US SEC noted that, under the jurisdiction's existing federal laws and regulations, the use of a DEP by a broker-dealer may, depending on the relevant facts and circumstances, constitute a recommendation for purposes of Regulation Best Interest ("Reg BI").[58] Broker-dealers satisfy their obligations under Reg BI by complying with four specified component obligations:

- a disclosure obligation;
- a care obligation;
- a conflict of interest obligation; and
- a compliance obligation.[59]

Also, investment advisers have a fiduciary duty to eliminate, or at least to expose all conflicts of interests, including those that arise from their use of DEPs, which might incline them—consciously or unconsciously—to render advice that is not disinterested.[60]

TABLE 8

DEPs AND PROVISION OF INVESTMENT ADVICE	
Jurisdiction / Regulator	**Relevant observation**

[58] See Section 4.1.

[59] See RFI at 31-32.

[60] See RFI at 39 et seq.

Canada (OSC)	OSC published two reports on Gamification and Dark Patterns.[61] These two reports observed the use of DEPs to steer or direct users towards certain choices, some of which can be beneficial (e.g., opening an account) while others can be harmful (e.g., investing in riskier assets). The use of DEPs may steer or direct investors towards certain products (e.g., top traded lists being prominently featured, or a prominent display to direct investors to "explore crypto" when they are in their investment account).
France (AMF)	AMF France observed cases, where the suitability tests took the form of online quiz. In this way, investors tended to consider the test a game to assess their knowledge, rather than a test to evaluate whether the product was suited to their knowledge and experience. Cases like the above were seen in the provision of robo-advising by a private bank. Where the use of DEPs translates into the provision of investment service, it must comply with the EU regulatory framework, in particular with MiFD II Directive and Market Abuse Regulation (MAR).
Hong Kong (SFC)	SFC observed the use of robo-advice.
Italy (CONSOB)	Currently, transactions involving DEPs in Italy are carried out within the context of pure execution services, without any provision of investment advice.
Spain (CNMV)	CNMV observed some firms offering online advice via web or apps usually on noncomplex products (UCITS). CNMV also observed one firm offering a suggestion of a portfolio (including graphs and simulations of future returns), based on the answers of the retail investor to a set of simple questions (risk profile). This element was part of the marketing materials in relation to an advice service offered by the firm, but it included a disclaimer that the preliminary suggestion will need to be confirmed with a complete suitability test.
Taiwan (FSC)	As of now, DEPs used by securities firms in Taiwan usually provide investment information only.

61 See Ontario Securities Commission, "OSC Staff Notice 11-79 – Digital Engagement Practices in Retail Investing: Gamification and Other Behavioural Techniques", November 2022, available at: https://www.osc.ca/sites/default/files/2022-11/sn_20221117_11-796_gamification-report.pdf and See Ontario SC, Research Report, "Digital Engagement Practices: Dark Patterns in Retail Investing", February 2024, available at: https://www.osc.ca/sites/default/files/2024-02/inv-research_20240223_dark-patterns.pdf

The Netherlands (AFM)	AFM did not observe DEPs that explicitly contain advice or recommendations. However, they observed DEPs or elements of the choice environment that may reasonably be interpreted as an (implicit) advice or recommendation by retail investors. In a study on online investment platforms, AFM observed differences in the default option and other elements of the choice environment, such as the way in which options are ordered and structured. Investors may be drawn to investment products that are listed at the top or at the home screen of the app. This may in part be due to investors following the path of least resistance (i.e., inertia); however, it may also be due to investor interpreting these design choices as implicit recommendations. For instance, when an option presented prominently on the landing page of a website or app, it may be interpreted by investors as the recommended option.
Türkiye (CMB)	CMB conducted investigations upon the use of certain programs/applications by intermediary institutions that enable investors to create their own signals and strategies, and programs with similar working principles that generate scenarios regarding the results of technical analysis with the help of graphics. As a result, CMB has determined that the service provided by the applications could be considered as general recommendations, which do not fall under the framework of investment advisory activity. Investment advisory services may only be provided by investment firms who have obtained a licence from the CMB under the regulatory framework related to provision of investment advisory services. General recommendations and provision of financial information activities may be carried out without obtaining authorisation from the Board, provided that they are in compliance with the legislation.
United Kingdom (FCA)	The FCA consider the use of DEPs are often associated with "execution-only" services. The FCA have explored the use of DEPs with some firms in their supervisory work and research. However, the FCA do not have an exhaustive population of firms that use DEPs. Moreover, FCA do not specifically know the reasons why those firms use those DEPs. The FCA do observe the use of educational materials integrated into online trading platforms of some firms. This can include explainer videos or articles about general investment education, or more specific information about products/services available on the platform. The FCA also have observed social/community features such as forums in online platforms where retail investors can participate in open discussions to share insights and trading strategy, or even comment on trades that other traders have executed (e.g., a trade by a lead trader - copy trading), to initiative a conversation among investors about this action.
United States of America (NFA)	NFA recently began a project to review mobile applications used by their members. NFA also conducted a review of members' websites

	and other on-line advertising, whereby the exchanges offer smaller-sized futures contracts to attract more retail investors. These projects are still on-going.
United States of America (SEC)	Existing Investment Adviser Obligations. The Investment Advisers Act of 1940 ("Advisers Act") establishes a federal fiduciary duty for investment advisers, regardless of whether they are registered or required to register with the U.S. SEC. The fiduciary duty is made enforceable by the anti-fraud provisions of the Advisers Act. The fiduciary duty is broad and applies to the entire adviser-retail investor relationship and must be viewed in the context of the agreed-upon scope of that relationship.[62] As a fiduciary, an investment adviser owes its investors, including retail investors, a duty of care and a duty of loyalty.[63] An adviser's duty of care includes, among other things: i. a duty to provide investment advice that is in the best interest of the retail investor, based on a reasonable understanding of the retail investor's objectives;[64] ii. a duty to seek best execution of a retail investor's transactions where the adviser has the responsibility to select broker-dealers to execute retail investor trades (typically in the case of discretionary accounts); and iii. a duty to provide advice and monitoring at a frequency that is in the best interest of the retail investor, considering the scope of the agreed relationship.[65] Rules adopted under the Advisers Act also impose various obligations on registered investment advisers (and investment advisers required to be registered with the U.S. SEC), including, among others: • Disclosure Requirements. Registered investment advisers are subject to a number of retail investor disclosure

[62] For example, to the extent that an adviser provides investment advice to a client through or in connection with a DEP, then all such investment advice must be consistent with the adviser's fiduciary duty.

[63] This fiduciary duty "requires an adviser to adopt the principal's goals, objectives, or ends." See Commission Interpretation Regarding Standard of Conduct for Investment Advisers, Advisers Act Release No. 5248 (June 5, 2019) [84 FR 33669, 33671 (July 12, 2019)] ("IA Fiduciary Duty Interpretation") (internal quotations omitted). This means the adviser must, at all times, serve the best interest of its client and not subordinate its client's interest to its own. See id.

[64] In order to provide such advice, an investment adviser must have a reasonable understanding of the client's objectives. See id. at 33672-73.

[65] See id. at 33669-78.

	obligations, including disclosures that must be provided before or at the time of entering into an advisory contract, annually thereafter, and when certain changes occur.[66] • Compliance Programs. Under rule 206(4)-7, a registered investment adviser must adopt and implement written policies and procedures reasonably designed to prevent violation of the Advisers Act and the rules thereunder by the firm and its supervised persons.[67] • Supervision Obligations. Registered investment advisers have a duty to reasonably supervise certain persons with respect to activities performed on the adviser's behalf.[68] Existing Broker-Dealer Obligations • Standard of Conduct. Regulation Best Interest ("Reg BI") requires broker-dealers that make recommendations of securities transactions or investment strategies involving securities (including account recommendations) to retail investors to act in their best interest, and not place the broker-dealer's interests ahead of the retail investor's interest.[69] The use of a DEP by a broker-dealer may, depending on the relevant facts and circumstances, lead to a recommendation for purposes of Reg BI.[70] Broker-dealers satisfy their obligations under Reg BI by complying

66 See, e.g., 17 CFR 275.204-3 (requiring an adviser to deliver a Form ADV Part 2A brochure to advisory clients); 17 CFR 275.204-5 (requiring an adviser to deliver Form CRS to each retail investor).

67 See 17 CFR 275.206(4)-7.

68 See Advisers Act section 203(e)(6), 15 U.S.C. 80b-3(e)(6).

69 17 CFR 240.15l-1; Regulation Best Interest: The Broker-Dealer Standard of Conduct, Exchange Act Release No. 34-86031 [84 FR 33318 (July 12, 2019)] ("Reg BI Adopting Release"). Following the adoption of Reg BI, which, among other things, incorporated and enhanced the principles found in FINRA's suitability rule (Rule 2111), FINRA amended Rule 2111 to, among other things, state that the rule does not apply to recommendations subject to Reg BI. See Exchange Act Release No. 89091 (June 18, 2020) [85 FR 37970 (June 24, 2020)].

70 Reg BI Adopting Release, id., at 33337. The determination of whether a recommendation has been made turns on the facts and circumstances of a particular situation. Id. at 33335 ("Factors considered in determining whether a recommendation has taken place include whether a communication 'reasonably could be viewed as a "call to action"' and 'reasonably would influence an investor to trade a particular security or group of securities.' The more individually tailored the communication to a specific customer or a targeted group of customers about a security or group of securities, the greater the likelihood that the communication may be viewed as a 'recommendation.'") (citation omitted); see also NASD Notice to Members 01-23 (Apr. 2001) (Online Suitability—Suitability Rules and Online Communications) (providing examples of electronic communications that are considered to be either within or outside the definition of "recommendation"). To the extent that a broker-dealer makes a recommendation, as that term is interpreted by the SEC (US) under Reg BI, to a retail customer through or in connection with a DEP, Reg BI would apply to the recommendation.

	with four specified component obligations: a disclosure obligation;[71] a care obligation;[72] a conflict of interest obligation;[73] and a compliance obligation.[74] Additional suitability obligations are imposed on broker-dealers when recommending transactions in certain types of securities, such as options, to any retail investor.[75] In 2021 the Commission issued a "Request for Information and Comments on Broker-Dealer and Investment Adviser Digital Engagement Practices, Related Tools and Methods, and Regulatory Considerations and Potential Approaches; Information and Comments on Investment Adviser Use of Technology to Develop and Provide Investment Advice", requesting comments on, among other issues, the use of DEPs by market intermediaries. The Commission issued the request for information (RFI), in part, to develop a better understanding of the market practices associated with firms' use of DEPs and related analytical and technological tools and methods. The Commission was also hoping to learn what conflicts of interest may arise from optimization practices and whether those optimization practices affect the determination of whether DEPs are making a recommendation or providing investment advice.[76] Comment letters were submitted in response to the RFI.

[71] The disclosure obligation requires the broker-dealer to provide certain required disclosure before or at the time of the recommendation, about the recommendation and the relationship between the broker-dealer and the retail customer. 17 CFR 240.15l-1(a)(2)(i).

[72] The care obligation requires the broker-dealer to exercise reasonable diligence, care, and skill in making the recommendation. 17 CFR 240.15l-1(1)(a)(2)(ii).

[73] The conflict of interest obligation requires the broker-dealer to establish, maintain, and enforce written policies and procedures reasonably designed to address conflicts of interest associated with its recommendations to retail customers. Among other specific requirements, broker-dealers must identify and disclose any material limitations, such as a limited product menu or offering only proprietary products, placed on the securities or investment strategies involving securities that may be recommended to a retail customer and any conflicts of interest associated with such limitations, and prevent such limitations and associated conflicts of interest from causing the broker-dealer or the associated person to place the interest of the broker-dealer or the associated person ahead of the retail customer's interest. 17 CFR 240.15l-1(a)(2)(iii).

[74] The compliance obligation requires the broker-dealer to establish, maintain, and enforce written policies and procedures reasonably designed to achieve compliance with Reg BI. 17 CFR 240.15l-1(a)(2)(iv).

[75] See, e.g., FINRA Rule 2360(b)(19).

[76] See US SEC, "SEC Requests Information and Comment on Broker-Dealer and Investment Adviser Digital Engagement Practices, Related Tools and Methods, and Regulatory Considerations and Potential Approaches; Information and Comments on Investment Adviser Use of Technology", available at: https://www.sec.gov/news/press-release/2021-167.

CHAPTER 6: MARKET INTERMEDIARIES' GOVERNANCE AND CONFLICTS OF INTEREST MANAGEMENT RELATED TO DEPs

6.1 - Internal governance, management of conflicts of interest, fiduciary and conduct obligations

In their feedback to the IOSCO survey, most IOSCO members stated that they did not observe unique or dedicated supervisory tools set up by intermediaries to supervise the use of DEPs. Intermediaries adapted their supervisory framework to the different ways DEPs were incorporated into their business model.

For example, ASIC (Australia) identified varying levels of controls put in place by intermediaries in their review of social media influencers in 2021 and their DEPs review in 2022/23.[77] Following ASIC's inquiries, one intermediary - who had promotional arrangements in place with 20 finfluencers - ceased its relevant activity.

According to ASIC, some intermediaries operating in Australia and using the suite of social trading DEPs such as copy trading, leaderboards, news feeds and social trading (which have the potential to stray into investment advice or recommendations) did state that they had controls in place to supervise the use of DEPs, although some appeared to be a light touch approach.

The examples ASIC observed included:

- Copy trading – The intermediaries' compliance team assess both what the copied traders/popular investors are trading and where and what amount of money from those who are following them flows to. The intermediary also used algorithms to monitor stock fluctuations and the copied traders trading behaviours in these stocks.

[77] In relation to intermediaries' use of finfluencers in this jurisdiction, some market intermediaries stated they were not prepared to engage finfluencers due to the moral hazard and regulatory risk being too high. Others had arrangements in place with up to 40 finfluencers and relied on a set of selection and monitoring criteria to manage their risk.

- Newsfeed (described as being like a Facebook page) – The intermediary moderates the content of the feed.

- Social trading – The intermediary offered the ability for retail investors to follow "best stock traders". The intermediary ranked these traders by performance, concentration and risk and used filters to remove some traders based on the ranking results. The intermediary also had a back office (in house built) system to identify any suspicious market abuse activity and used a dedicated team for review. ASIC note that since their review, this provider does not appear to offer social trading anymore to Australian retail investors.

From the regulators' side, most IOSCO members reported that they do not specifically monitor DEPs since they consider the activities of the firm holistically - thus including DEPs - in their compliance reviews. If there are concerns relating to specific DEPs that come to their attention, they may review and consider appropriate regulatory action (e.g., discussions with the specific firms, issuing guidance).

Certain regulators, such as the AFM (The Netherlands) and FCA (United Kingdom) seem to be developing a more proactive supervisory approach that considers how firms are using DEPs. For example, the AFM carried out general risk analyses on market developments in the field of digitalization. Namely, they studied the online choice environment in investment apps by opening trading accounts.[78]

According to the AFM's conclusions, firms should be aware that the way in which choices are presented to investors in the choice environment does influence investor behaviour. A well-designed choice environment can promote sensible investment decisions, such as investing in financial instruments that suit the investor's investment goals (e.g., not too risky) and sufficiently diversifying the portfolio. AFM therefore encourages investment firms to develop an online investment platform that aligns with both their investment services and the interests and needs of their client base. For example, if the investment firm offers investment services that allow customers to fulfill their need for long-term asset accumulation, it should consider using a preset timeframe for the displayed historical returns that aligns with this philosophy. Or if the investment firm serves inexperienced investors, it should consider visually limiting the product set available to that investor. Since it is difficult to predict the (exact) effect of specific elements in the online choice environment on investor behaviour, this regulator noted that it is very important that investment firms test whether specific elements in their online choice

[78] See AFM, Report, "Observing online investment platforms An exploratory study into guiding investor behaviour", available at: https://www.afm.nl/~/profmedia/files/publicaties/2023/report-observing-online-investment-platforms.pdf

environment have the desired effect – preferably by means of behavioural experiments.

Similarly, the FCA is keeping trading apps under review to make sure that retail investors can make investment decisions that suit their needs and is seeking to be more proactive in its approach through targeted supervisory engagement. FCA identified that firms in its jurisdiction are required to identify and mitigate potential conflicts of interest, including where the firm can make a financial gain at the expense of the retail investor. Firms are responsible for assessing whether the use of DEPs would lead to a conflict that cannot be mitigated and therefore would need to be disclosed. In addition, under UK Consumer Duty rules, firms need to meet requirements under a cross-cutting obligation to act in good faith and avoid causing foreseeable harm. As these rules are outcomes based, the FCA is not prescriptive on what steps firms need to take to meet these requirements.[79]

6.2 - Platform design and related governance and conflicts of interests

Certain regulators stated that their jurisdictions had governance structures or noted governance structures put in place by market intermediaries specifically related to the operation of online trading platforms.

For example, according to AFM (The Netherlands), most investment firms the regulator spoke with had governance structures in place for decision making on the design of online platforms, which would include the design and use of DEPs. The firm's compliance function was usually involved in the decision making and would monitor whether the investors' interests had been sufficiently taken into account. Regarding monitoring DEPs and other elements of the online choice environment that may steer investor behaviour, several investment firms in the jurisdiction indicated they engaged in A/B testing.[80]

[79] FCA (UK) ("In recent times, we are taking steps to ask firms about the DEPs that they are using more proactively and how they ensure that DEPs do not cause foreseeable harm under the Consumer Duty rules.").

[80] A/B testing refers to running a learning model on two different datasets with a single change between the two, which can help identify causal relationships and, through understanding how changes affect outcomes, gain a better understanding of the functionality of a model. See Seldon, A/B Testing for Machine Learning (July 7, 2021) ("Seldon"), https://www.seldon.io/a-b-testing-for-machine-learning. This regulator also stated in the survey response that it has not specifically spoken to investment firms on the governance structure with regards to the use of AI/ML in DEPs. See also FCA (UK) (noting that, for some of the firms that the regulator engaged with on trading application design features, some did carry out A/B testing for DEPs and monitored the different impact on investor behaviour. This regulator noted that the level of detail applied to this testing could vary, and the regulator

In Hong Kong (SFC) market intermediaries have specific obligations as Platform Operators, including that the Online Platform is properly designed and operated in compliance with all applicable laws and regulations. There are specific obligations for Platform Operators regarding information for client, including making clear and adequate disclosure of relevant material information on its Online Platform.[81] This regulator also has relevant regulation related to robo-advisors.[82] In addition, the regulator's Code of Conduct has rules related to conflicts of interest, including independence and disclosure and fair treatment.[83] Market intermediaries are expected to comply with the core principles with regards to governance, capabilities, and resources, including the following details from the regulator's "Online Distribution Guidelines":

- A Platform Operator should ensure that there are robust governance arrangements in place for overseeing the operation of its Online Platform as well as adequate human, technology, and financial resources available to ensure that the operations of its Online Platform are carried out properly.
- A Platform Operator should establish and implement written internal policies and procedures on the operation of its Online Platform, including about overall management and supervision; a formalized governance process; clearly identified reporting lines; and managerial and supervisory controls.
- A Platform Operator should conduct regular reviews to ensure that these internal policies and procedures are in line with regulatory developments and promptly remedy any deficiencies identified.
- In operating its Online Platform, a Platform Operator should ensure that it has sufficient technology resources to, for example, safeguard data

saw inconsistencies where some firms were not carrying out this type of testing at all.); SEC (Thailand) (the Regulatory Framework for the use of Artificial Intelligence and Machine Learning in the Capital Market ensures that the use of AI/ML must be in accordance with the regulations and principles, such as AI/ML must be fair and transparent and be monitored on an ongoing basis).

81 Online Distribution Guidelines (Core Principle 2, Information for clients). These disclosures include, among other things, providing clients with access to up-to-date product offering documents or information; providing clients with material information as soon as reasonably practicable; communicating any information in plain language; informing clients of the scope and limitations of services and investment products that are provided; disclosing to clients any remuneration to be paid by the client or other persons to the Platform Operator and any other monetary benefits received or receivable by the Platform Operator; and providing clients with the Platform Operator's contact details.

82 Online Distribution Guidelines (Chapter 4, Robo-Advice). In this jurisdiction, robo-advice (sometimes referred to as digital advice or automated advice) involves the provision of financial advice in an online environment using algorithms and other technology tools.

83 Code of Conduct General Principle 6 (Conflicts of interest); Paragraph 10.1 (Disclosure and fair treatment); and Paragraph 10.2 (Independence).

integrity, including confidential client information, and meet current and projected operational needs.

In addition, the Online Distribution Guidelines for Hong Kong also include guidelines around certain core principles of proper design,[84] information for clients,[85] risk management,[86] review and monitoring;[87] and record keeping.[88]

[84] Ensuring the Online Platform is properly designed and operated in compliance with all applicable laws and regulations.

[85] Making clear and adequate disclosure of relevant material information on its Online Platform.

[86] Ensuring the reliability and security (including data protection and cybersecurity) of its Online Platform.

[87] Appropriate reviews of all activities conducted on the Online Platform should be performed by a Platform Operator as part of its ongoing supervision and monitoring obligation.

[88] Maintaining proper records in respect of its Online Platform.

CHAPTER 7: ENFORCEMENT PRACTICES, INTERNATIONAL COOPERATION AND CROSS-BORDER ASPECTS

As highlighted at the onset, IOSCO's work program on retail market conduct embraces a holistic approach looking at policy, enforcement, and investor education as complementary to each other. As new retail trends, such as the use of DEPs, increase, the potential for misconduct affecting retail investors continues to rise.

Online fraud is often based on impersonation and the use of behavioural techniques on the retail segment, whereby fraudulent activities are accompanied by intense digital marketing and promotions. Retail investors increasingly turn to higher risk products, sometimes with high degrees of leverage and without the benefit of financial advice. Firms who wish to defraud investors can manipulate these retail patterns through systematic targeting and certain techniques, such as the gamification of the trading environment, to the disadvantage of uninformed and inexperienced retail investors.

Increasingly, the on-line (and cross-border) nature of product offerings may not only increase the risk of mis-selling, but also exacerbate "herd behaviour" promoted by way of social media. Lack of financial education and regulatory oversight in certain spot markets (such as crypto assets), may further exacerbate the potential risks.

Taken all together, IOSCO members face an environment where retail investors can incur unexpected losses as a result of trading that is inconsistent with their risk tolerance levels or financial capacity, or invest in fraudulent offerings or offerings by unregistered entities. In such an environment, a core question is whether retail investors are induced into the trading of products beyond their risk tolerance/financial capacity and/or more frequently than appropriate for them. Moreover, investors may also engage in different investing strategies (such as use of margin or option trading) than they otherwise would have. In this context, the further question is what IOSCO should do to address these retail investor risks.

7.1 - Enforcement actions regarding harmful activities involving DEPs

In their response to the IOSCO survey, three regulators reported harmful activity related to the use of DEPs. Among those, one regulator[89] reported market intermediaries fraudulently using platforms with DEPs features.

For example, the US SEC reported two publicly available cases where conflicts of interest related to a firm's use of DEPs resulted in harm to investors. In the first case, a "no-fee" robo-adviser was required to hold a certain percentage of assets in cash, resulting in lower returns for investors and additional revenue for the brokerage group. In the second case, a broker-dealer agreed to remove certain gamification features from its platform and to pay $7.5 million to a government agency. These two US cases are discussed in more detail in the Enforcement Actions section, below. Similarly, OSC (Canada) highlighted that firms may be using inappropriate DEPs, which could be identified as "dark patterns," "dark nudges," or "sludge", as reported in the table below.[90]

Table 9 presents commonly observed patterns of potentially inappropriate DEPs techniques that may result in retail investor harm, which IOSCO members have observed.

TABLE 9

POTENTIALLY INAPPROPRIATE DEPs (DARK PATTERNS, DARK NUDGES, SLUDGE)	
Dark patterns	
Technique	**Definition**
Prompts and reminders	**"Prompts"** are brief visual, graphic, or auditory stimuli that grab the user's attention to encourage specific behaviors or choices. **"Reminders"** are a specific type of prompt that follow up on a previous interaction or engagement.
Intermediate Currency	**"Intermediate currencies**" obscure the price of an item by providing it in a currency other than the normal, predominant currency.

[89] ASIC Australia

[90] See Ontario SC, Research Report, "Digital Engagement Practices in Retail Investing: Gamification & Other Behavioural Techniques", November 2022, available at: https://www.osc.ca/sites/default/files/2022-11/inv_research_20221117_gamification-of-retail-investing_EN.pdf; and "Digital Engagement Practices: Dark Patterns in Retail Investing", February 2024, available at: https://www.osc.ca/sites/default/files/2024-02/inv-research_20240223_dark-patterns.pdf

Ranking	**"Ranking"** refers to setting the order that options are presented on a user interface in a way that privileges or promotes certain choices.
Sensory manipulations	**"Sensory manipulations"** refer to changes to the user interface that focus the user's attention on one thing to distract them from something else.
Social norms and interactions	**"Social norms and interactions"** refer to two related sets of techniques that leverage how people look to the behaviour of others for cues on their own choices.
Scarcity claims	**"Scarcity claims"** are statements that a product or service will not be available for long due to limited supply, pending price increases, or other factors.
Hidden fees / information	Information about fees or other important platform features like privacy protections can be **"hidden"** through outright omission, delayed disclosure, or complex language, among other means.
Dark nudges	
Technique	**Definition**
Removal of process steps	Practices that make it easier for users to make inadvertent or ill-considered decisions by removing the requirement for one or more actions (e.g., confirmations).
Defaults	A default is a preselected setting that automatically takes effect unless users actively change it.
Sludge	
Technique	**Definition**
Process frictions	People tend to procrastinate or avoid tasks when they are deemed challenging, tedious, or boring. Sludge plays to this tendency by creating "psychological fences" that impede an individual's ability to get things done.
Complex language	The use of technical, overly complex (e.g., "legalese"), or lengthy language to confuse or distract the user.

7.2 - Enforcement actions

In their feedback to the IOSCO survey, some IOSCO members have presented the enforcement actions/cases they have taken in relation to the use of DEPs by market intermediaries.

For example, the US SEC reported two cases, in which conflicts of interest associated with a firm's use of DEPs resulted in harm to investors.

One enforcement action involved allegations that an adviser marketed that its "no fee" robo-adviser portfolios were determined by a "disciplined portfolio construction methodology" when they were allegedly pre-set to hold a certain percentage of assets in cash because the adviser's affiliate was guaranteed a certain amount of revenue at that level. The action states that the adviser did not disclose its conflict of interest in setting the cash allocations; that this conflict resulted in higher cash allocations, which could negatively impact performance in a rising market; and that the cash allocations were higher than other services because the retail investors did not pay a fee.[91] In another case[92] a market intermediary and the Massachusetts Secretary of the Commonwealth entered into a settlement in January 2024 relating to certain gamification features relied on by the firm, pursuant to which the firm paid $7.5 million and must, among other things, remove all emojis from the lifecycle of a transaction, cease future use of certain waitlist tapping features, cease future use of certain confetti or other celebratory imagery directly tied to frequency of trading, cease future use of certain generalized push notifications, and cease future use of certain features that mimic games of chance.[93]

Other authorities also reported enforcement cases related to DEPs in a broader context.

By way of example, the UK FCA has taken supervisory action to prevent potential harm to consumers that has been caused by a lack of robust systems and management of information at firms to monitor and act on detrimental consumer behaviour when using their products. They have also engaged with firms about new products and services being launched to ensure that they meet the rules and guidance under the Consumer Duty regulations.

Ontario OSC (Canada) contacted market intermediaries about marketing practices that encouraged increased and quick trading of crypto assets. Additionally, intermediaries were also asked to remove messaging that implied OSC approval of their fitness for conduct or to comply with requirements when using another registered firm's name. The OSC has also actively updated its investor warning and alerts list to name unregistered market intermediaries that

91 In re Charles Schwab & Co., Inc., et al., Exchange Act Release No. 95087 (June 13, 2022) (settled order).

92 In re Robinhood Financial LLC vs. Secretary of the Commonwealth, 214 N.E.3d 1058 (Mass. Sup. J. Ct. Aug. 25, 2023) (https://law.justia.com/cases/massachusetts/supreme-court/2023/sjc-13381.html).

93 In re Robinhood Financial, LLC, [Docket Nos. E-2020-0047 and E-2022-0006], Consent Order dated Jan 18 2024, available at: https://fingfx.thomsonreuters.com/gfx/legaldocs/akvemqyznvr/01182024robinhood.pdf

may be engaging in fraudulent activities, often using DEPs to mislead investors. The public may check to see if a market intermediary appears on the list.

Poland KNF investigated fraudulent trading platforms engaging with retail investors and submitted notifications of suspected criminal offense to the public prosecutor. They also issued public warnings about "forex" platforms.

Hong Kong SFC reprimanded and fined a firm HK$4.8 million for regulatory breaches and took action against two of its responsible officers of the firm. SFC monitored the virtual asset trading platform (VATP) space and took preliminary action against misleading and exploitative finfluencer activity. The SFC also noted social media ramp-and-dump market manipulation schemes and conducted investigations into suspected syndicates.

7.3 - Investor complaints

Most regulators do not have statistics on investor complaints related to DEPs.

SEC Thailand also reported having received complaints on DEPs.

The US SEC received a wide variety of comments in response to their request for information (RFI) on DEPs,[94] and some of the comments[95] included negative statements related to DEPs.

7.4 - International cooperation and cross-border aspects

As markets are global and interconnected in nature, regulators should have the ability to share information and cooperate with regulators and relevant authorities in other jurisdictions.

According to the results from the IOSCO regulators' survey, most IOSCO members do not have information on whether DEPs targeting local investors

[94] See US SEC, "Request for Information and Comments on Broker-Dealer and Investment Adviser Digital Engagement Practices, Related Tools and Methods, and Regulatory Considerations and Potential Approaches; Information and Comments on Investment Adviser Use of Technology to Develop and Provide Investment Advice", August 2021, available at: https://www.sec.gov/files/rules/other/2021/34-92766.pdf

[95] See US SEC, Comments on Request for Information and Comments on Broker-Dealer and Investment Adviser Digital Engagement Practices, Related Tools and Methods, and Regulatory Considerations and Potential Approaches; Information and Comments on Investment Adviser Use of Technology to Develop and Provide Investment Advice, available at: https://www.sec.gov/comments/s7-10-21/s71021.htm

are carried out by domestic or overseas market intermediaries. However, IOSCO members note that intermediaries, wherever located, may need to register with local authorities prior to providing services in their jurisdiction, thereby subjecting those firms to local rules and jurisdiction. The registration requirement may limit the "transnational" problems faced in dealing with use of DEPs by market intermediaries.

As few regulators reported fraudulent activity in relation to the use of DEPs, they were not able to share evidence on the need for cross-border cooperation, nor on the obstacles encountered.

One regulator[96] shared that, generally, when cross-border cooperation is needed, securities regulators are able to rely on the IOSCO EMMoU and the bilateral Memorandum of Understanding to work with the correspondent regulator to launch a joint investigation on a pump-and dump scam.[97]

96 The Hong Kong Securities and Futures Commission ("Hong Kong SFC"), the Monetary Authority of Singapore ("MAS"), and the Commercial Affairs Department of the Singapore Police Force have launched a joint investigation into a syndicate suspected of operating pump-and-dump scams on stocks listed on the Hong Kong Stock Exchange. Refer to the press release on this topic in the following link: https://apps.sfc.hk/edistributionWeb/gateway/EN/news-and-announcements/news/doc?refNo=21PR125,

MAS: https://www.mas.gov.sg/news/media-releases/2021/singapore-hong-kong-joint-operation-against-suspected-cross-border-pump-and-dump-syndicate#:~:text=The%20Monetary%20Authority%20of%20Singapore,the%20Securities%20and%20Futures%20Act%20.

97 In a pump-and-dump scam, the syndicate would artificially pump up the price of a company's shares by buying up the shares and spreading false positive news about the company via social media and messaging applications to induce unwary victims to buy the shares. When prices are sufficiently high, it dumps by selling the stocks to the victims. The victims are left holding stocks with plummeted value and end up suffering substantial losses while syndicate members profit from the scam.

CHAPTER 8: DEPs & INVESTOR EDUCATION

8.1 - Investor education about DEPs – Good Practices

DEPs can be a useful tool in promoting investor education and educational material. Based on IOSCO survey feedback, a relatively small proportion of regulators released retail investor educational material or campaigns specifically related to DEPs. Some regulators also indicated that use of DEPs is not included in their investor education efforts at the time of the survey.

Among the few specific initiatives linked to DEPs, the AMF France launched a video on Instagram to explain the principles of DEPs and shared main results of a laboratory experience on gamification.[98]

The CMB Türkiye discussed the issue of digitalization in its 2022 and 2023 IOSCO-World Investor Week (WIW) programs to raise awareness and increase financial education (panel held online during the WIW 2023 regarding digitalisation, among others).

The Belgium FSMA published an article about trading apps[99] on its www.wikifin.be and in its monthly Wikifin Newsletter. In its article, the FSMA highlighted that "Investing is not a game. Some banks and investment firms offer you a "trading app", an application on your smartphone or tablet that allows you to trade investment products at any time. Some apps prompt you with advanced gaming techniques to be as active as possible. You receive messages with unmissable opportunities of the moment and see the scores of other investors. This blurs the line between information and publicity. Some apps offer crypto currencies in addition to traditional shares, bonds and funds. These are not considered financial instruments and therefore the MiFID rules protecting investors do not apply. Want to know more about trading apps? Read the article on the Wikifin website".

The Ontario SC's GetSmarterAboutMoney publishes different articles exploring topics related to behavioural science and social media. During the pandemic,

98 https://www.instagram.com/reel/C1XN3MSl6ZG/?igsh=aXRhd29hNnMzNTRp

99 See Wikifin, "Investing via a trading app", available at: https://www.wikifin.be/nl/sparen-en-beleggen/hoe-beleggen-en-risicospreiding/hoe-beleggen/beleggen-een-trading-app

the OSC also explored innovative ways to reach investors on social media.[100] The OSC continues to create targeted approaches to reach investors through its social media channels using organic and paid promotions. In addition, the OSC also developed a trading simulation with gamification techniques to educate investors about trading[101].

The Office of Investor Education and Advocacy of the US SEC issued Investor Alerts and Bulletins to warn investors of possible fraudulent schemes and to educate investors on a range of topics.[102]

In 2021, USA FINRA issued a Special Notice to request comment on effective methods of educating newer investors. Since that time, FINRA has undertaken an extensive "search engine optimization" (or SEO) effort to increase the likelihood of FINRA content being returned when investors search for information on the internet. FINRA also has piloted a paid search campaign. FINRA is refining existing content and launching other new educational content on social media (including on new channels) to counteract the emotions DEPs often stir up and slow decision-making.[103] In 2024, FINRA launched an online

[100] According to the OSC article, "Our paid campaigns incorporate the targeting mechanisms available through social media platforms for reaching investors effectively and one recent campaign of note is our Reddit PSA campaign that highlighted the risks of relying only on information found on social media. This campaign was developed during the GameStop and meme stock event when investors were trading on specific stocks based on the information found in Reddit forums. The campaign also included our key message of always checking registration and the entire campaign was viewed over a million times covering both campaign key messages".

[101] https://www.getsmarteraboutmoney.ca/tools/get-smarter-about-trading/

[102] See, e.g., Social Media and Investment Fraud: Investor Alert, available at: https://www.investor.gov/introduction-investing/general-resources/news-alerts/alerts-bulletins/investor-alerts/social-media; Automated Investment Tools: Investor Bulletin, available at: https://www.investor.gov/introduction-investing/general-resources/news-alerts/alerts-bulletins/investor-alerts/investor-56; Social Sentiment Investing Tools – Think Twice Before Trading Based on Social Media: Investor Alert, available at: https://www.investor.gov/introduction-investing/general-resources/news-alerts/alerts-bulletins/investor-bulletins-18; Excessive Trading at Investors' Expense: Investor Alert, available at: https://www.investor.gov/introduction-investing/general-resources/news-alerts/alerts-bulletins/investor-alerts/investor-42; Robo-Advisers: Investor Bulletin, available at: https://www.investor.gov/introduction-investing/general-resources/news-alerts/alerts-bulletins/investor-bulletins-45. These Investor Alerts and Bulletins represent the views of the staff of the US SEC's Office of Investor Education and Advocacy. They are not rules, regulations, or statements of the US SEC. The US SEC has neither approved nor disapproved this content. These Investor Alerts and Bulletins, like all staff statements, have no legal force or effect: they do not alter or amend applicable laws, and they create no new or additional obligations for any person.

[103] See FINRA, Investor Insights, "Following the Crowd: Investing and Social Media", March 2023, available at: https://www.finra.org/investors/insights/following-crowd-investing-and-social-media; FINRA, Special Notice, "FINRA Requests Comment on Effective Methods to Educate

advertising campaign, entitled “Get Your Head in the Trade,” to encourage new investors to understand investment risks and rewards as well as their own financial goals and risk tolerance before making an investment decision.[104]

The FCA (UK) launched the InvestSmart campaign in 2021 aimed at helping consumers, especially those that are less experienced, to make better-informed investment decisions. A range of information has been developed to promote positive investment principles, including spotting the signs of hype and managing the fear of missing out (FOMO) which might be associated with DEPs that put investors under pressure to act quickly. Several content channels are used to promote the campaign, including a dedicated website, and social media.

The Investor and Financial Education Council (IFEC), a subsidiary of the Securities and Futures Commission of Hong Kong, China used animated video, web content and social media posts to offer an overview of the latest products and services provided by online investment service providers, reminding investors on cybersecurity and to be aware of their rights and responsibilities when engaging in online investment activities. Furthermore, IFEC, CFA Institute and CFA Society Hong Kong co-hosted a webinar on “Macroeconomic outlook and trends in Fintech, online platforms gamification” in 2023 to discuss the latest online investment trends, including the proliferation of online investment platforms and the impact of gamification on retail investors.

The CMC Angola creates content for social media on different topics, some related to social media and DEPs. During the IOSCO World Investor Week, 5 webinars were conducted (2,619 participants), and a dedicated website was made available. As far as gamification, three educational games (Russian Roulette, Word Search, Hangman) were created and incorporated into the website for World Investor Week. The CMC Angola anticipates creating at least five more similar games in 2024. They also conduct surveys via QR codes to gather data on investor satisfaction, and to guide their actions.

Additionally, some regulators are aware of initiatives on DEPs set up by other regulatory or private sector groups. For instance, UK FCA noted that the Competition and Markets Authority in the UK have carried out research into

Newer Investors”, June 2021, available at: https://www.finra.org/rules-guidance/notices/special-notice-063021.

[104] See FINRA News Release, “FINRA Campaign Urges New Investors to Take Key Steps Before Trading,” at: https://www.finra.org/media-center/newsreleases/2024/finra-campaign-urges-new-investors-take-key-steps-trading.

online choice architecture more broadly, that considers the digital design and how this can harm competition and consumers.[105]

8.2 - Use of DEPs by market intermediaries to facilitate investor education

A few regulators highlighted direct examples of tools provided by market intermediaries (through visual insights, game environment, quiz formats, mobile applications, trading simulators and, more in general, by an academy or education materials) to engage and attract retail investors. If properly used, these tools can facilitate retail investors' education.

Some consultation respondents noted that where market intermediaries employ DEPs for investor education, those tools should not be used to promote specific products or strategies, and any disclosure should be fair and balanced.

[105] See UK Government Research and Analysis: Online Choice Architecture: How digital design can harm competition and consumers. Available at https://www.gov.uk/government/publications/online-choice-architecture-how-digital-design-can-harm-competition-and-consumers

CHAPTER 9: PROPOSED IOSCO GOOD PRACTICES

IOSCO Members could consider the following good practices as guidance regarding the use of DEPs by the market intermediaries they regulate, consistent with their relevant legal and regulatory framework.

Design Factors and Respecting Investor Best Interest

1. **Market intermediaries should take reasonable steps to ensure that DEPs used for investment advice or recommendations do not influence retail investor behaviour to the benefit of the market intermediary and detriment of the retail investor. Market intermediaries should test whether DEPs used for investment advice or recommendations are in the best interest of the retail investor.**

2. **When designing DEPs, market intermediaries should take reasonable steps to ensure that DEPs used for investment advice or recommendations are not intended to increase transaction volume and fees for the market intermediary, without regard to the interests of retail investors.**

Monitoring the use of DEPs & Investment Advice

3. **Where the use of DEP entails provision of investment advice or recommendations, market intermediaries that use DEPs should hold the relevant licence/regulatory status and comply with the rules pertaining to the provision of those investment services.**

4. **Market intermediaries should put in place risk management systems to help ensure that the use of any DEPs does not result in the provision of any investment services without the required license and is consistent with the relevant jurisdictional regulatory frameworks and requirements.**

Suitability

5. **Market intermediaries should ensure that the use of DEPs for investment advice or recommendations is in line with the relevant jurisdictional regulatory frameworks governing suitability.**

6. **Market intermediaries should ensure that DEPs used for investment advice or recommendations are not used for products and services that are inconsistent with the retail investor profile, in line with the relevant jurisdictional regulatory frameworks governing suitability.**

For example, DEPs used for investment advice or recommendations should be tailored to promote products that align with the knowledge and experience, risk profile and financial objectives of the targeted retail investor and should ensure that the offering and selling of financial products and services is suitable to the targeted retail investors.

7. Market intermediaries should carry out regular monitoring - including the analysis of retail investor complaints - as to whether the market intermediary's DEPs used for investment advice or recommendations put the interests of the market intermediary above the interests of the retail investor, and if so, the market intermediary should take corrective actions to prevent this result in the future.

Governance and management of conflicts of interests

8. Market intermediaries should have reasonably designed procedures in place and take appropriate steps to identify and prevent or manage any conflicts of interest between themselves and their retail investors arising from the use of DEPs for investment advice or recommendations, in line with the relevant jurisdictional regulatory frameworks. Market intermediaries should consider periodically reviewing their DEPs to identify and prevent or manage any potential conflicts of interest.

Disclosure

9. Market intermediaries using DEPs for investment advice or recommendations should provide adequate disclosures to the retail investor, such as disclosure of material facts at the point of transaction, including fees and costs, remunerations and benefits and material conflicts of interest, in line with the applicable rules in their jurisdiction. For jurisdictions that include finfluencers and / or external partners as DEPs, market intermediaries should include material information on payments to finfluencers and / or external partners.

Investor education

10. IOSCO members should consider making use of DEPs for investor education purposes. IOSCO members are encouraged to leverage DEPs as educational tools, helping to improve financial literacy and promote responsible investment behaviours among retail investors, including helping retail investors understand the difference between a digital platform's educational and promotional content.

CONCLUSION

The digital transformation in retail markets brings about various novel regulatory challenges, potential benefits and potential conduct risks. The growth in the use of DEPs merits careful consideration, as it can result in an increase in the speed of distribution of financial products. The DEPs phenomenon is expected to grow in combination with other technological developments, such as deployment of more advanced AI & ML technologies, an issue which may require specific regulatory attention in the future.

Notwithstanding the potential and benefits from DEPs, particularly in improving retail market segment access to financial products and services and enriching investor choice, DEPs may result in investor harm. They may encourage investors to trade more often than is suitable or appropriate, invest in higher risk products or change their investment strategy without being aware of, or fully understanding, the risks. Similarly, DEPs can create potential conflicts of interest as market intermediaries may use them to influence retail client behaviour to drive revenue growth to the detriment of retail investors.

This report aims to lay out potential risks (and benefits) from the use of DEPs by market intermediaries. It provides good practices to enhance investor protection against these potential risks from the use of DEPs by market intermediaries.

It is crucial that regulators keep pace with the developments in DEPs and fine-tune their regulatory approach to address the increasing use of DEPs by market intermediaries in online distribution, onboarding and marketing efforts. One important consideration in this context is how to use DEPs for regulatory purposes as regulators, to enhance retail investor education and improve investor knowledge.

APPENDIX

List of IOSCO members that responded to the IOSCO survey

Jurisdiction	Regulatory Authority	
Angola	Authority for the Financial Markets	AFM
Australia	Securities and Exchange Commission	SEC
Bahamas	Komisja Nadzoru Finansowego	KNF
Belgium	Capital Market Authority	CMA
Brazil	Monetary Authority of Singapore	MAS
Canada Ontario	National Securities Market Commission	CNMV
Canada Quebec	Financial Supervisory Commission	FSC
China	The Securities and Exchange Commission	SEC
France	Capital Markets Board of Türkiye	CMBT
Hong Kong	The Financial Conduct Authority	FCA
India	Commodity Futures Trading Commission	CFTC
Italy	National Futures Association	NFA
Japan	Securities and Exchange Commission	SEC
Korea	Financial Industry Regulatory Authority	FINRA
Kuwait	Authority for the Financial Markets	AFM
Mexico	Securities and Exchange Commission	SEC
The Netherlands	Komisja Nadzoru Finansowego	KNF
Nigeria	Capital Market Authority	CMA

Poland	Monetary Authority of Singapore	MAS
Saudi Arabia	National Securities Market Commission	CNMV
Singapore	Financial Supervisory Commission	FSC
Spain	The Securities and Exchange Commission	SEC
Taiwan	Capital Markets Board of Türkiye	CMBT
Thailand	The Financial Conduct Authority	FCA
Türkiye	Commodity Futures Trading Commission	CFTC
United Kingdom	National Futures Association	NFA
United States of America	Securities and Exchange Commission	SEC
United States of America	Financial Industry Regulatory Authority	FINRA
United States of America	Authority for the Financial Markets	AFM
United States of America	Securities and Exchange Commission	SEC

Consultation Questions for Digital Engagement Practices Report

IOSCO requested feedback on 8 questions, which are listed below:

QUESTION 1: How would you define DEPs? What should the scope of this definition cover?

QUESTION 2: Do you agree with the findings of the Consultation Report and the proposed Guidance? Are there any significant issues, gaps, or emerging risks that should be further explored in the report?

QUESTION 3: Are there any other types of DEPs deployed by market intermediaries that are not covered in this report? Please elaborate providing examples and describing their impact on investor behaviour.

QUESTION 4: How do you expect DEPs use cases to evolve in the future? What would be the regulatory implications?

QUESTION 5: What additional risks or benefits of DEPs should be considered? In your opinion, does the existing regulatory framework sufficiently address these risks, or are new measures needed?

QUESTION 6: In your opinion, how should market intermediaries best avoid potential conflicts of interests when they are using DEPs? What should the best practices be in this respect? Please elaborate by highlighting the areas of conflicts of interests and how they can best be addressed/mitigated.

QUESTION 7: How can market intermediaries maximize the potential benefits of DEPs to improve investor outcomes and enhance financial literacy? How should regulators effectively leverage DEPs to advance regulatory goals, such as investor protection and education? In your opinion, how can potential benefits of DEPs be achieved for better investor outcomes and investor education purposes? How should regulators best leverage from the use of DEPs for regulatory objectives?

QUESTION 8: How can regulators better coordinate across jurisdictions to address the cross-border use of DEPs, particularly in cases where different regulatory standards apply? What mechanisms could enhance global regulatory alignment?

Summary of Feedback and IOSCO responses

On 19 November 2024, IOSCO consulted on a set of good practices and regarding Digital Engagement Practices (DEPs). The feedback period closed on 20 January 2025, with a total of 8 responses received from a range of stakeholder falling into these broad categories:

1. Industry association (2)

2. Securities regulator (4)

3. Exchange operator (1)

4. Asset Manager (1)

The IOSCO Board is grateful for the responses and took them into consideration when preparing the Final Report for Digital Engagement Practices (Final Report). The rest of this chapter summarizes the replies received on the consultation questions.

Feedback received summarised as following:

Question 1: How would you define DEPs? What should the scope of this definition cover?
Summary of feedback: Most respondents expressed support or neutrality toward the proposed definition of DEPs, albeit with their own additional suggestions, while a minority of respondents opposed the definition outright, suggesting definition be substantially amended or removed entirely. Three of eight respondents expressed concern that the definition might become outdated due to the rapid evolution of technology and (in one response) investor demands. Suggestions included avoiding prescriptive definitions in favour of future proofed principles and removing specific examples from the definition (i.e. robo-advisors). One respondent commented that a common regulatory definition was both inappropriate and unnecessary due to this concern, advocating instead for a principles-based, technology-agnostic framework that does not rely on technical and/or specific definitions. One respondent highlighted that DEPs can be used in both regulated services and surrounding business practices. One respondent suggested DEP regulation focus on their possible harmful effects and intended outcome, rather than the chosen digital tool, marketing or psychological technique. Some respondents suggested amendments to the definition, with one suggesting broadening the scope to capture digital strategies and methods used to interact with retail investors. Another respondent suggested adding "investing" to the US SEC's description of DEPs, alongside "trading, robo-advice, and financial education" to cover instances of crowdfunding, or IPO opportunities that may have been misrepresented or marketed to retail investors. Some respondents suggested alternative definitions. Particularly, one respondent suggested distinguishing between engagement practices (influences that can either facilitate or inhibit certain behaviours), and engagement practice tools (instruments or methods designed to support the implementation of engagement practices), arguing that risks stemmed from behavioural strategies themselves as opposed to the digital tools used to apply them. Another respondent proposed that an alternative definition should be used as a generic outline at the beginning of the Report, as opposed to replacing the Report's definition. One respondent offered a

different view, which framed DEPs as a natural evolution of customer engagement practices, similar to that of push notifications replacing phone calls from brokers, emphasizing DEPs as methods of customer engagement, advertising, and education facilitated through digital means.

One respondent noted an advantage of the Report's definition was that it did not introduce any judgement regarding the use of DEPs by avoiding terms like "manipulate" and "deceive". Another respondent thought the Report's definition appropriate as it encompassed its capital markets and included common digital tools observed in those markets.

IOSCO's response:
To assist readers to determine when DEPs are being used, the Final Report now includes common elements that are typical of DEPs. It also includes two definitions that reference that DEPs contain a technological aspect and a behavioural component. These changes should reduce risk that the definition of DEPs is less likely to become outdated and future harmful practices are not excluded because of technological advancements.

Question 2: Do you agree with the findings of the Consultation Report and the proposed Guidance? Are there any significant issues, gaps, or emerging risks that should be further explored in the report?

Summary of feedback:

Six out of seven respondents generally agreed with the findings of the Report. In doing so, some summarized the Report.

One of the respondents listed some weaknesses in the conceptual aspect of the Report:

The respondent wrote the Report lacked a clear and concise structure, making difficult to convey the DEP concept, which bundles copy trading as a type of DEP alongside behavioural nudges and gamification. The respondent felt categorization weaknesses causes misconception when trying to define DEPs, as these practices do not share similar characteristics.

The respondent also felt the Report did not address ways that can distinguish between detriments caused by DEPs and investor negligence and misbehaviour.

Two respondents mentioned the need for investor segmentation.

One wrote that the report lacked an agreed upon average investor benchmark for investment and risk literacy, i.e. it would have been beneficial to see the relationship between DEP practices and varying levels of financial literacy by region.

The other wrote that each investor's behaviour and decisions depend on the context, environment, and individual characteristics of the investor. Therefore, market intermediaries should provide DEP-related services in the best interest of the investors.

One respondent suggested that the use of AI and ML to customize the digital experience should be expanded.

Others would like to see more high-level recommendations for regulatory oversight and enforcement.

One respondent wrote that disclosure is fundamental, and that IOSCO can contribute to discussions regarding the standardization of content and update frequency of DEPs policies, as well as the structure of disclosure materials.

Although in agreement with the risks involved, one respondent cautioned against adding more layers of regulation and oversight in jurisdictions where a framework already exists, stating that DEP-specific regulatory requirements would be unnecessary and duplicative. The respondent explained that conflicts described in the Report are the same types that can arise with any form of engagement with a client.

The same respondent also had reservations about some of the academic and regulatory literature in the Report and statements drawn from them.

For example, the Report claims that research has shown “retail investors’ behavior in response to the use of DEP’s may deviate from standard rational models of behavior.” None of the cited materials, however, suggest that retail investors exist in a natural state of rationality and self-interest. Instead, they begin with the premise that retail investors are naturally irrational and can be influenced by a variety factors. Hence the Report should not imply that DEPs are the reason retail investors make economically irrational decisions.

The respondent also felt that the Report comes to some conclusions by citing studies that are only remotely related to the use of DEPs by financial intermediaries. In some cases, the Report does not disclose the limited scope of some of the studies.

The respondent disagreed with the claim that "direct evidence on how DEPs may be used for the benefit of investors is sparse." Relevant scholarly sources would disprove this statement.

IOSCO's response:

Considering that most respondents agree with the findings of the Report, IOSCO did not restructure it.

Additional thoughts expressed on the need for investor segmentation, the standardization of disclosure contents and the potential use that AI and ML in relation to DEPs are duly noted and could be considered for future work that IOSCO would pursue on the topic of DEPs.

Finally, IOSCO expanded the Report to balance out the risks presented by the use of DEPs in engaging with investors with some benefits they may also present.

Question 3: Are there any other types of DEPs deployed by market intermediaries that are not covered in this report? Please elaborate providing examples and describing their impact on investor behaviour
Summary of feedback: There is support by the respondents for the types of DEPs covered by the Consultation Report. In other words, no respondents disagreed with the types of DEPs that are currently enumerated in the Consultation Report. However, certain respondents suggested the coverage of additional examples or use cases of DEPs, or additional coverage of certain DEPs in the Final Report. First, two respondents suggested the Final Report should place greater emphasis on the benefits of certain DEPs to investors. One of these respondents stated that retirement calculators and portfolio monitoring tools were examples of DEPs that help investors. The same respondent noted that DEPs can provide access to time-sensitive information that may be useful to investors. Another respondent discussed examples of DEPs that it views as beneficial to investors such as retirement savings nudges,

educational and information DEPs regarding asset allocations away from cash, and certain informational models and other nudges.

Second, one respondent suggested the expansion of the DEPs discussed in the Consultation Report to cover the gambling and sports betting markets and the contracts for difference (CFD) market.

Third, two separate respondents from the same agency both made suggestions for the discussion of additional types of DEPs. One of these respondents suggested that the Final Report should address in greater detail the use of discount codes/affiliate links, noting that "flash sales" and discounts increase consumer engagement. The respondent also mentioned graphic representations of historical (or expected) performance, as well as digital targeting (which appears to be another term for differential marketing). The other respondent from the same agency noted that the Consultation Report does not address all biases and shortcuts that might be exploited by market intermediaries and noted that regulatory agencies should monitor and adapt to the evolving landscape of biases and shortcuts if they decide to regulate DEPs.

IOSCO's response:

With one exception, IOSCO considers that no change to the report is needed based on respondent feedback.

With respect to responses about expanding the report to cover DEPs in sports betting and gambling, those activities are beyond the scope of this Report, and therefore no edits are required. Similarly, while the response is true that the Consultation Report does not address all biases and heuristics that might be exploited by market intermediaries in connection with their use of DEPs, it would not be possible for the Final Report to do so. In addition, biases and shortcuts are not in themselves DEPs, and therefore do not require an expansion of the types of DEPs that are discussed in the Report.

With respect to the response requesting additional treatment of discount codes/affiliate links and graphic representations of historical (or expected) performance without any context, IOSCO believes that this does not affect the existing good practices listed in the Consultation Report. In addition, there is already a fulsome discussion of these items (or types of items) within the Consultation Report. Finally, IOSCO believes any discussion of "digital targeting" is contained within the discussions of "differential marketing" in the Consultation Report. Therefore, IOSCO believes that no changes need to be made to the Final Report with respect to this comment.

On the other hand, two respondents asked that the Final Report place greater emphasis on the benefits of certain DEPs to investors. IOSCO does not believe that these comments require a change to the proposed good practices, but agrees with the respondent that IOSCO should add more information to the Final Report to help present a balanced presentation of DEPs. Additional discussion of items like retirement calculators and portfolio monitoring tools can demonstrate to regulators, market intermediaries, and investors that DEPs, when used appropriately, can provide valuable services to retail investors. This discussion will also serve IOSCO well in contrasting helpful DEPs from those that may present a risk to investors.

Question 4: How do you expect DEPs use cases to evolve in the future? What would be the regulatory implications?

Summary of feedback:

Most respondents viewed that DEPs will evolve with the advancement of technology in the future. They saw both benefits and potential risks in the use of DEPs and, in their view, presented some regulatory implications.

<u>Evolution in use cases</u>

Respondents emphasized that DEPs are rapidly evolving with AI and ML, making investor interactions more personalized through features like voice assistants, chatbots, and advanced analytics, adapting to the demands of a growing investor base, especially on self-directed trading platforms. These technologies enhance user engagement, provide tailored investment advice, and help investors make informed decisions. DEPs also improve access to financial markets, lower costs, and encourage responsible investing habits.

One respondent expected DEPs to evolve with advances in technology, particularly AI and ML. The respondent noted an example of investors using voice assistants and receiving personalized advice through natural language conversations, while advanced analytics enable more personalized investment products based on individual behavior, preferences, and goals.

Another respondent expected that DEPs could become increasingly personalized as firms leverage advanced analytics and AI to tailor the experience for individual investors. The respondent anticipated the introduction of features that not only engage users, but also provide insights into their financial behavior and preferences, thereby assisting them in making more informed decisions.

One respondent stated that the development depends on how the landscape of biases and heuristics evolves and how these can be exploited by market participants.

Another respondent anticipated that DEPs will be an integral part of market intermediaries' profitability with the growth of investment in User Experience (UX), financial psychology and digital marketing.

<u>Benefits of DEPs</u>

One respondent highlighted the benefits of DEPs, stating that DEPs have given retail investors access to new products and services, lower costs and better customer service. The respondent argued that DEPs have encouraged new retail investors to participate in the capital markets and have enabled investors to build wealth, increase their knowledge of the markets and establish responsible saving and investing habits.

<u>Potential risks</u>

A respondent listed the privacy of investors and the difficulty of monitoring the impacts of DEPs as two concerns in relation to the volume of data generated, and the detailed construction of investor profiles.

A respondent cautioned that, with the abundance of digital consumer data, consumers' ability to make fully independent investment decisions will be compromised.

<u>Regulatory implications</u>

One respondent expected that DEPs could be used against the interests of retail investors, particularly in relation to financial advice (where DEPs implicitly recommend or comment on a financial product) or in relation to discretionary investment management services, in a way that leads to potential enforcement action. The respondent also anticipated that generative AI could enable more harmful DEPs that fall outside the scope of the regulatory framework in some jurisdictions.

Two of the respondents noted that the market is still evolving. Therefore, the respondents were in favor of technology-neutral and future-proof regulatory guidance which are best equipped to address actual and potential risks.

IOSCO's response:

Regarding the evolution of use cases, DEPs are expected to evolve with advances in technology and IOSCO believes regulators should keep pace with the developments in DEPs and fine-tune their technology infrastructure and regulatory approach as discussed in chapter 5 (CURRENT GLOBAL STATE OF PLAY IN THE USE OF DEPs).

Regarding the benefits and risk, the comments are basically in line with IOSCO's analysis shown in chapter 4 (BENEFITS & RISKS ASSOCIATED WITH THE USE OF DEPs), but we will further discuss this point in the section of question 5 below.

Regarding the regulatory implications of harming retail investors, the proposed good practices are designed to cover such concerns, and IOSCO sees no need to change them. In relation to potentially harmful DEPs that fall outside the scope of the regulatory framework, IOSCO members are encouraged to work with other regulators in the relevant jurisdiction to address such harm.

Regarding technology-neutral and future-proof regulatory standards, IOSCO is confident in the benefit of this approach, especially in a changing environment. The good practices outlined in this report aim to offer principles-based, high-level guidance, regardless of the technology utilized, and to aspects of the future development of DEPs.

Question 5: What additional risks or benefits of DEPs should be considered? In your opinion, does the existing regulatory framework sufficiently address these risks, or are new measures needed?

Summary of feedback:

Two respondents highlighted additional potential benefits of DEPs, especially regarding the use of "nudges", or prompts to investors. Otherwise, there is an overall support from respondents for the risks and benefits that are considered in the Report, with no need for clarification being expressed. However, according to respondents, cybersecurity vulnerabilities and data privacy may require additional attention. Furthermore, most respondents are of the view that DEPs will continue to evolve to facilitate customization. DEPs will be integral to the profitability of market intermediaries with the growth of investment into user experience (UX), financial psychology and digital marketing and the abundance of consumer digital data.

Existing investor protection rules appear sufficient, with strong support for principle-based, technology-agnostic regulatory frameworks. Imposing a broad technology-focused framework to certain technologies and investor interactions could create regulatory ambiguity and uncertainty and impair innovation designed to benefit investors. Yet, regulatory guidance is encouraged. Furthermore, it is suggested that regulators and agents should possess a comprehensive understanding of how DEPs operate to identify uses that constitute investor manipulation and potential infractions.

IOSCO's response:

IOSCO inserted in the Final Report mention of the feedback received from respondents on the increased vulnerabilities to cyberattacks that market intermediaries are subject to in using DEPs. The Report was also amended to expand on potential benefits that nudges and prompts may present to investors.

IOSCO agrees that DEPs will continue to evolve and to warrant regulators' attention, therefore confirming the need for regulators to possess a comprehensive understanding of how DEPs are used and operate on investors' behaviour.

Question 6: In your opinion, how should market intermediaries best avoid potential conflicts of interests when they are using DEPs? What should the best practices be in this respect? Please elaborate by highlighting the areas of conflicts of interests and how they can best be addressed/mitigated.

Summary of feedback:

There is overall support for the proposed good practices enumerated in the Consultation Report. Specifically, respondents stated that disclosures, in combination with policies and procedures, internal controls, and technology, are good practices for eliminating or mitigating conflicts of interest. Respondents also stated that market intermediaries should adhere to jurisdictional laws and regulations. And one respondent stated that setting high-level, broad expectations for outcomes is preferable to taking a detailed prescriptive approach to best practices.

In addition to echoing specific proposed good practices, one respondent suggested that market intermediaries could avoid using default settings, and instead personalize settings for investors, to eliminate or mitigate conflicts of interest. And another respondent suggested general principles for the construction of policies and procedures.

Finally, one respondent stated that partnerships between regulators, exchanges, and self-regulatory organizations on educational initiatives and data sharing related to DEPs should be encouraged.

IOSCO's response:

IOSCO considers that no change to the report is needed based on respondent feedback. Many respondents have agreed with the proposed good practices related to conflicts of interest. In particular, respondents noted that disclosures, in combination with internal policies and controls, can be effective in eliminating or mitigating conflicts of interest. There are already proposed good practices in the Consultation Report that address, either explicitly or implicitly, the suggestions made by the respondents, and therefore there is nothing in the existing proposed good practices that would need to be changed from the Consultation Report to the Final Report.

Finally, one respondent stated that partnerships between regulators, exchanges, and SROs on educational initiatives and data sharing related to DEPs should be encouraged. IOSCO believes that this suggestion is implicit in both IOSCO's mission and the report, even if not explicitly stated in the current proposed good practices, so there is no need to add a statement or additional good practice to the Final Report.

Question 7: How can market intermediaries maximize the potential benefits of DEPs to improve investor outcomes and enhance financial literacy? How should regulators effectively leverage DEPs to advance regulatory goals, such as investor protection and education? In your opinion, how can potential benefits of DEPs be achieved for better investor outcomes and investor education purposes? How should regulators best leverage from the use of DEPs for regulatory objectives?

Summary of feedback:

The majority of respondents supported the use of DEPs to improve investor outcomes and enhance financial literacy. Many put forward suggestions on how regulators could leverage the use of DEPs and what benefits could be achieved.

Improving investor education and financial literacy

There was agreement among respondents that DEPs could be used to improve investor education, for both intermediaries and regulators. Many noted regulators could strengthen investor education using various channels including (but not limited to) webinars, social media, financial courses, publications and AI chatbots, to encourage positive and beneficial investor behaviour. It was noted DEPs could empower investors by allowing for tailored knowledge based on investor needs; engaging investors generally; ensuring products and services are not detrimental or are within investors risk profiles and consequently improving portfolio diversification; and providing an easy and understandable path to financial planning and literacy.

Similar sentiments were made for intermediaries, suggesting various educational tools such as articles and tutorials. One respondent suggested a joint educational campaign between regulators and intermediaries to provide investors with valuable information, thereby enhancing financial literacy. An example given in two responses was the assistance and benefit of DEPs used by intermediaries for retail investors involved in retirement planning. One respondent noted that regulators could encourage and facilitate the development of educational DEPs that encourage financial literacy and positive outcomes. Some respondents thought the use of gamification type tools such as trading simulations were beneficial and should be encouraged.

Improving investor outcomes and decision-making

Most respondents agreed DEPs could enhance investor outcomes through investor engagement and education, by improving transparency, reducing information asymmetries, and encouraging good investor behaviour through warnings or highlighting risky actions. One respondent noted regulators should collect data on the use of DEPs and their impact on investor outcomes.

For intermediaries, most respondents agreed DEPs can and do support understanding client needs, risk tolerance, and financial goals. One respondent noted they can enable informed decision-making by providing real-time information on fees, risks and market performance while promoting healthy investing behaviour. This was noted to assist investors in achieving success by reducing costs, enhancing engagement and improving risk management. Some respondents highlighted that intermediaries could also use DEPs on investor education to empower investors to make informed decisions. Engagement was a reoccurring benefit in this area, with both regulators and intermediaries able to strengthen client relationships.

Information gathering

Some respondents agreed that DEPs, for intermediaries, could assist in understanding client needs, risk tolerance and financial goals. One respondent noted DEPs allow for faster collection and dissemination of information relating to key user information, for both regulators and intermediaries.

Personalised advice

Some respondents suggested DEPs could be used to provide personalised advice and resources for investors through tools such as chatbots, robo-advisors and other auto-conversational tools. These tools could be beneficial as they could increase trading volume, allow investors to better visualise suitable investment options aligned with their profiles and allow for better insights into customer needs, allowing for personalised advice and information based on client needs.

Improved communication, monitoring and compliance

Some respondents shared the benefits of DEPs for communications between investors and intermediaries, specifically that they can enable feedback, improve sharing of information, allow reporting fraudulent activities and improve targeted engagement. Furthermore, one respondent noted DEPs could assist in monitoring market activities in real time, ensuring compliance and detecting irregularities.

Regulation of DEPs

Some respondents shared concern regarding the regulation of DEPs. Specifically, that IOSCO members that have adequate existing investor protection rules applicable to DEPs can instead continue to rely on these standards. One respondent noted additional regulation could affect the flow of beneficial information to retail investors. Another respondent noted that addressing question 7 comprehensively would require a detailed exploration of regulatory frameworks, and the distinction between technology and behavioural insights in the definition of DEPs.

IOSCO's response:

The text and good practices outlined in the Final Report are complimentary to the suggestions regarding how intermediaries and regulators could leverage DEPs to improve investor education, financial literacy, investor protection and regulatory objectives. However, IOSCO acknowledges market intermediaries are actively leveraging DEPs to improve investor education and, in recognition of this feedback, text has been added to the Final Report.

Question 8: How can regulators better coordinate across jurisdictions to address the cross-border use of DEPs, particularly in cases where different regulatory standards apply? What mechanisms could enhance global regulatory alignment?

Summary of feedback:

Respondents saw the need for coordination across jurisdictions. Some respondents suggested coordination and information sharing among regulators in relation to the use of DEPs and their underlying technology. Respondents noted their belief that it is a challenge to combat cross-border abuse of DEPs as this requires timely coordination among regulators. Respondents referred to the IOSCO EMMoU as a coordination measure.

<u>Coordination across jurisdictions</u>

Respondents suggested enhancing coordination and information sharing among regulators regarding the use of DEPs. Another respondent also recommended conducting joint meetings among regional regulators to promote mutual understanding.

One respondent recommended establishing a standardized taxonomy that clearly defines DEPs, their categories and the associated risks. Additionally, this respondent recommended that a unified framework for assessing and categorizing the negative consequences of DEPs should be developed to ensure a consistent approach.

One respondent identified a significant challenge in addressing abuse by intermediaries operating across different jurisdictions, as it necessitates timely coordination among regulators. This respondent noted that local regulators depend on information and cooperation from their foreign counterparts. The effectiveness of regulatory efforts can be enhanced by establishing clear protocols and stricter timelines, building on the provisions of the IOSCO MMoU/EMMoU. This is particularly important for: (i) responding to requests for information and (ii) addressing reports of irregularities, which could be handled more effectively by foreign regulators. Another respondent also referenced the IOSCO MMoU/EMMoU as a vital coordination measure.

Mechanisms to enhance global regulatory alignment:

One respondent expressed the belief that the good practices proposed in the report would enhance investor interests and transparency while facilitating the development of local regulations that treat DEPs in a consistent manner. Consequently, the good practices would enable easier harmonization with foreign regulatory standards, thereby addressing the cross-border utilization of DEPs.

Another respondent emphasized the importance of maintaining regulatory standards that are flexible, principles-based, technology-neutral and interoperable, considering the rapid pace of technological advancement and the broad range of tools that can be classified as DEPs.

IOSCO's response:

Regarding coordination and information sharing, including joint meetings of regional regulators, IOSCO agrees that regulators should have the ability to share information and cooperate with regulators and relevant authorities in other jurisdictions, as discussed in Section 7.4 (International Cooperation and Cross-Border Aspects). The relevant committees, including the regional committees, would continue to discuss the topic of DEPs in the future as needed.

Regarding the standard taxonomy, IOSCO believes that the discussion in Chapter 5 (CURRENT GLOBAL STATE OF PLAY IN THE USE OF DEPs) will help regulators to find a common language to discuss issues related to DEPs. The phenomenon of DEPs is expected to increase in combination with other technological developments, such as deployment of more advanced AI & ML technologies, an issue which may require specific regulatory attention in the future. In light of this situation, this report aims to provide high-level good practices rather than defining each individual use case.

Regarding the use of the IOSCO MMoU/EMMoU, IOSCO encourages such cross-border cooperation with some reservations. First, the number of authorities that have signed IOSCO MMoU or EMMoU is limited to 130 and 27, respectively, as of January 2025, and some jurisdictions from which offshore intermediaries obtain licenses are not signatories. Secondly, the scope of IOSCO MMoU/EMMoU is limited to issues relating to certain illicit financial activities[106] and some of the activities relating to DEPs may not fall within the scope of IOSCO MMoU/EMMoU.

Regarding technology-neutral and future-proof regulatory standards, IOSCO is confident in the benefit of this approach, especially in a changing environment. The good practices outlined in this report aim to offer principles-based, high-level guidance, regardless of the technology utilized.

[106] See Article 4 of IOSCO Multilateral MOU and Article 1 (4) of Text of the Enhanced Multilateral Memorandum of Understanding Concerning Consultation and Cooperation and the Exchange of Information